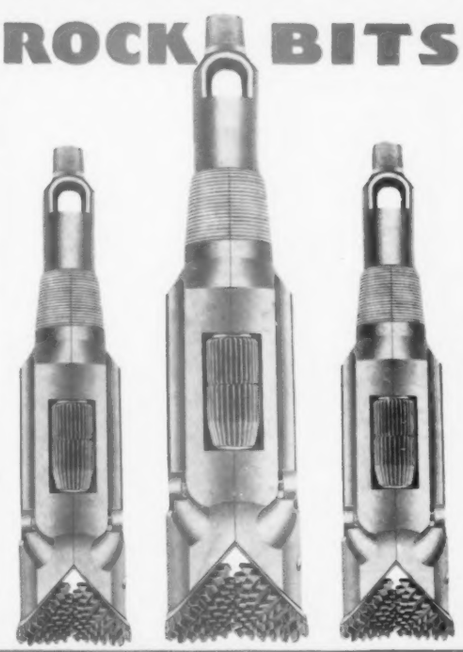
15 CENTS A COPY

THE OIL WEEKLY

Devoted Exclusively To The Production and Transportation of Oil and Gas

Engineering News Statistics

HUGHES ROCK BITS



Leadership

Thru Superior Performance

HUGHES TOOL COMPANY

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January 9, 1931

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The Hinge-Leg of Head—which eliminates necessity of having two complete rock bits in derrick and minimizes investment in equipment. Cones can be changed without removing shank from the drill pipe.

Ease of Changing Cones—instead of taking from one to two hours, this is a 10-minute job on the Model "M" Rock Bit.

Three-Point Reamer—insures a *round*, full-gauge hole—steadies the bit in the hole—gives maximum hole-clearance, insuring free circulation—large diameter reamer cutters.

Safety—in locking cones to bushing provided by an alloy steel ring inserted while hot and cooled in oil, making a positive lock without the use of threads.

Many advanced features

establish the supremacy of this rock bit . . . . . .

MODEL "M" ROCK BIT

"Rips Through the Earth"

Minimum Parts—and extreme simplicity assure minimum operating cost and maintenance.

Advanced Tooth Design—such that any wear comes from contacting formation and not by teeth *riding* each other.

Slush Lubrication—directly between cones eliminates balling up.

No Friction—cones and bushing packed in grease, eliminating possibility of their becoming friction-bound.

For complete information on this advanced bit, write for illustrated Bulletin No. 12-A.

Model M 3-point reamer can be used in combination with various types of bits, or to ream hole already drilled.

GLOBE OIL TOOLS CO.

LOS NIETOS, CALIFORNIA

Successors to

H. C. Smith Manufacturing Co., Inc. Wieman-Kammerer-Wright Co., Inc. National Tool & Metals, Inc.

Branches:

Ventura, Calif. Bakersfield, Calif. Taft, Calif. Hobbs, N. Mexico
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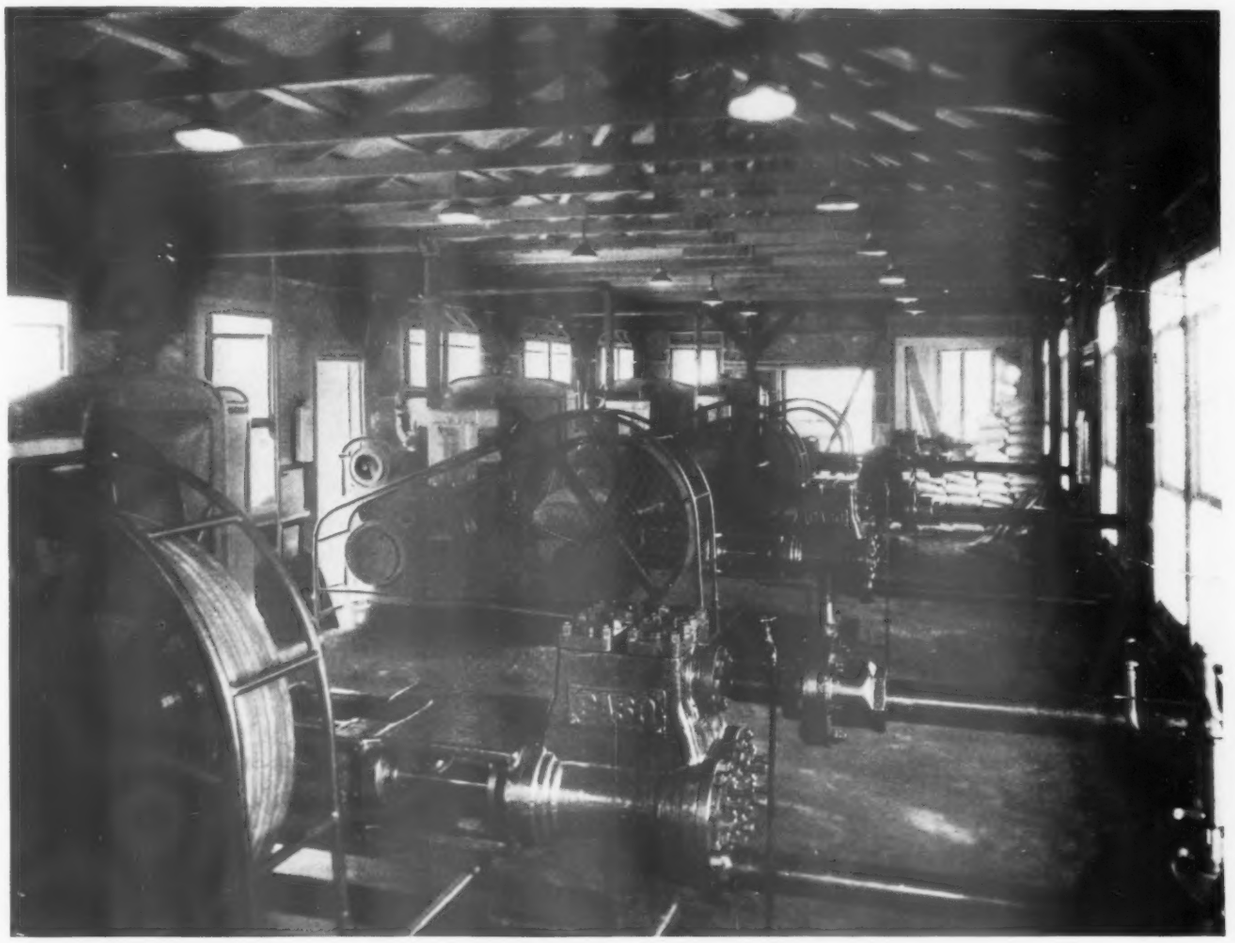
The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year, 15 cents per copy. Entered as second-class mail matter December 25, 1926, at the post office at Houston, Texas, under act of March 3, 187



.CAPACITY.
.PORTABILITY.

The four Diesel-powered Gaso Fig. 710 Pumps in the above station have a capacity of 24,000 bbls. per day at 650 lbs. pressure . . . Compactly mounted on steel skids, these units are easily moved . .

GASO PUMP & BURNER MFG. CO. - - - Tulsa, Okla.
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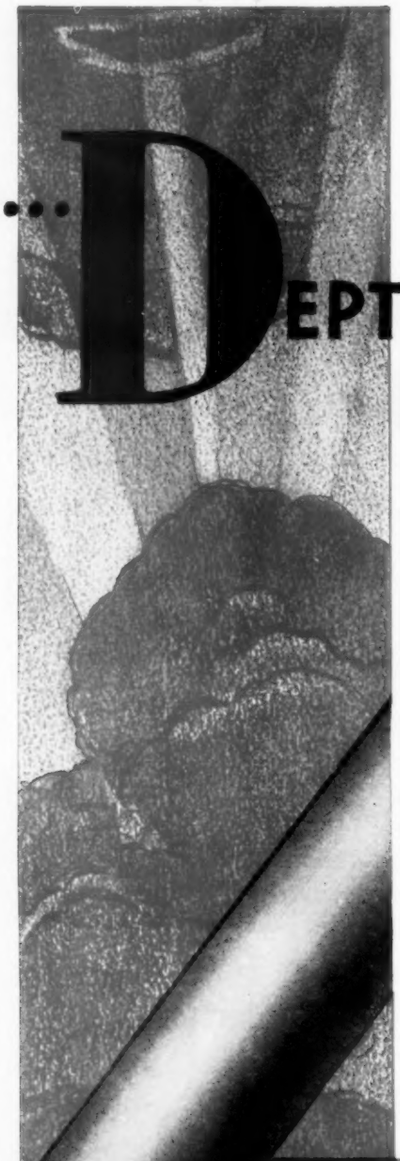
GASO PUMPS
FOR EVERY OIL INDUSTRY NEED

IN HIGH TENSILE CASING...



DEPTH *demands* DUCTILITY..

...because lateral pressure and vertical stress increase as the well deepens and the string gets heavier. Brittleness might mean disaster.

A special reheating, after rolling, normalizes the grain structure of Pittsburgh Seamless High Tensile Casing... restoring toughness and ductility by removing any strains set up in previous operations. This ductility is demonstrated by the photograph below which shows tested specimens with outside diameters reduced more than sixty per-cent without a sign of fracture.

Pittsburgh Steel Products Co.
Division of
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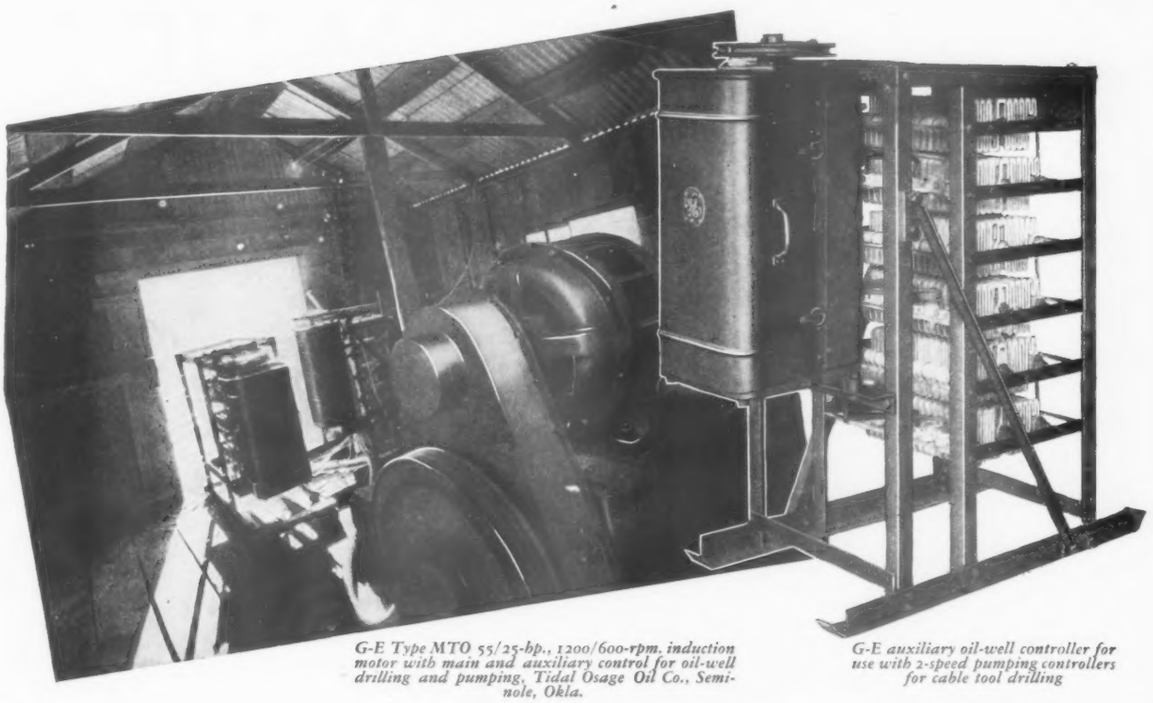
Prompt deliveries of Pittsburgh Seamless High Tensile Casing can now be made in both 95,000 and 110,000 lbs. per square inch minimum tensile grades, made to A.P.I. Specifications.

Pittsburgh Seamless

HIGH TENSILE CASING

3021



G-E Type MTO 55/25-hp., 1200/600-rpm. induction motor with main and auxiliary control for oil-well drilling and pumping, Tidal Osage Oil Co., Seminole, Okla.

G-E auxiliary oil-well controller for use with 2-speed pumping controllers for cable tool drilling

"Use the same motor for drilling and pumping?" Sure you can!

AFTER the well has been drilled, you don't need additional equipment to do the pumping.

Do your cable-tool drilling first with the right size G-E two-speed pumping motor and control. You may easily add the necessary auxiliary control to the main unit for close drilling adjustments. Then when the well is brought in, remove the auxiliary and go right ahead with the pumping.

Thus you have all of the refinements of speed control necessary for the most effective blow of the drilling bit, combined with ample capacity for pumping.

Investigate this distinct saving in money and time. The nearest G-E office will gladly supply you with complete details.

Where conditions favor a separate motor, General Electric offers the standard 75-hp. cable-tool equipment, which has been used successfully for many years.

Motorized Power
–fitted to every need

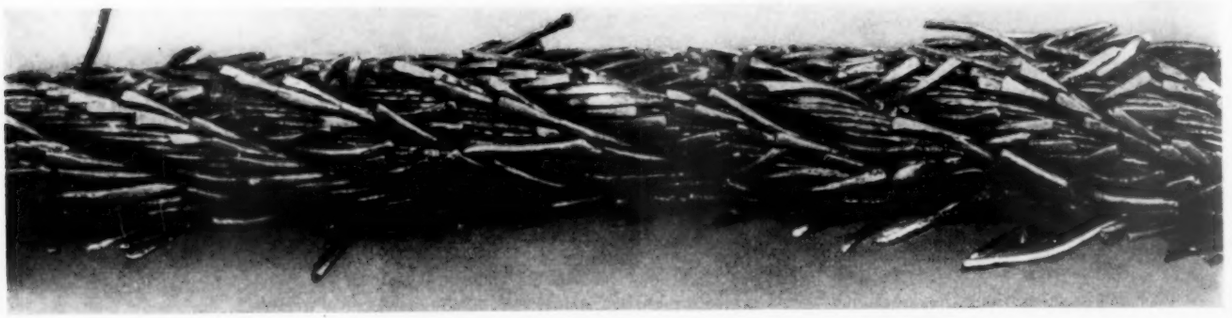
200-357

JOIN US IN THE GENERAL ELECTRIC PROGRAM, BROADCAST EV ERY SATURDAY EVENING ON A NATION-WIDE N.B.C. NETWORK

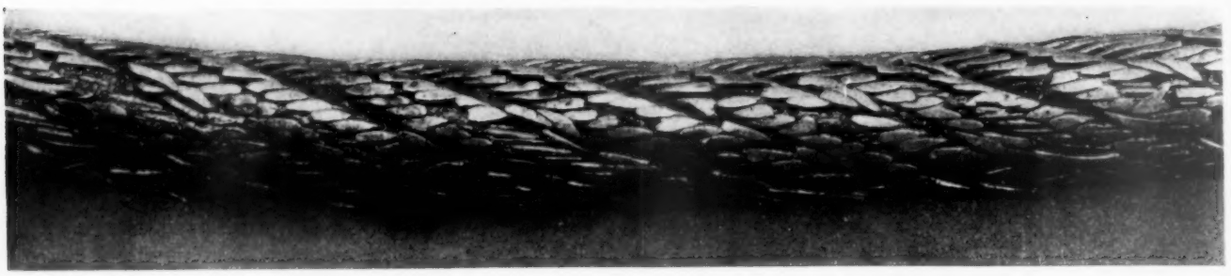
GENERAL ELECTRIC

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES

WITH BARE HANDS—



WHICH ONE WOULD YOU RATHER HANDLE?



Here are two unretouched photographs: the upper one is a piece of badly worn ordinary wire rope; the lower one shows a piece of badly worn Lay-Set Preformed Wire Rope.

If you were on the job, in overalls, which rope would *you* rather handle—gloves or no gloves?

When the wires and strands in Lay-Set finally do break, they lie flat—remain in place—do not stick out to jab workmen's hands. That's because Lay-Set is preformed.

. . . you see—preforming the wires and strands before they are assembled in the completed rope removes all internal stress. In Lay-Set, there is no locked up strain or tension. Every wire and strand is relaxed—free to do its full share of work without wasting part of its energy in pent up resistance. That's why Lay-Set lasts longer, is more flexible, much easier to handle, faster to install, and is *safer* for your workmen.

Lay-Set Preformed Wire Rope will give from 30 to 200 per cent increased service, depending upon working conditions. But as you can see, it also is *safer*.

Although these are actual photos, send for a sample of Lay-Set, that you can feel and handle

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HAZARD WIRE ROPE COMPANY, Wilkes-Barre, Pa.
Send me a sample of Lay-Set Preformed Wire Rope—the rope that conserves all its energy for real working service.

Name .....
Company .....
Address .....
Town ..... *State* .....

HAZARD WIRE ROPE COMPANY
WILKES-BARRE, PENNSYLVANIA
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BATTLE CRY OF THE ROUGH RIDERS...

ROUGH - TOUGH - NEVER GET ENOUGH!

Rough Rider Belt

The outstanding performance of Rough Rider Belt is due to careful manufacturing and selection of materials. It has more flexibility and resistance to abrasions and weather, yet less stretching and "bootlegging." Remember... the best is always the most economical. Rough Rider is your assurance of belting satisfaction.

The Rough Rider family—

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Severe Service Brands of Belting, Hose and Packing.

"If Continental Sells It....There Is No Better" C MR-1

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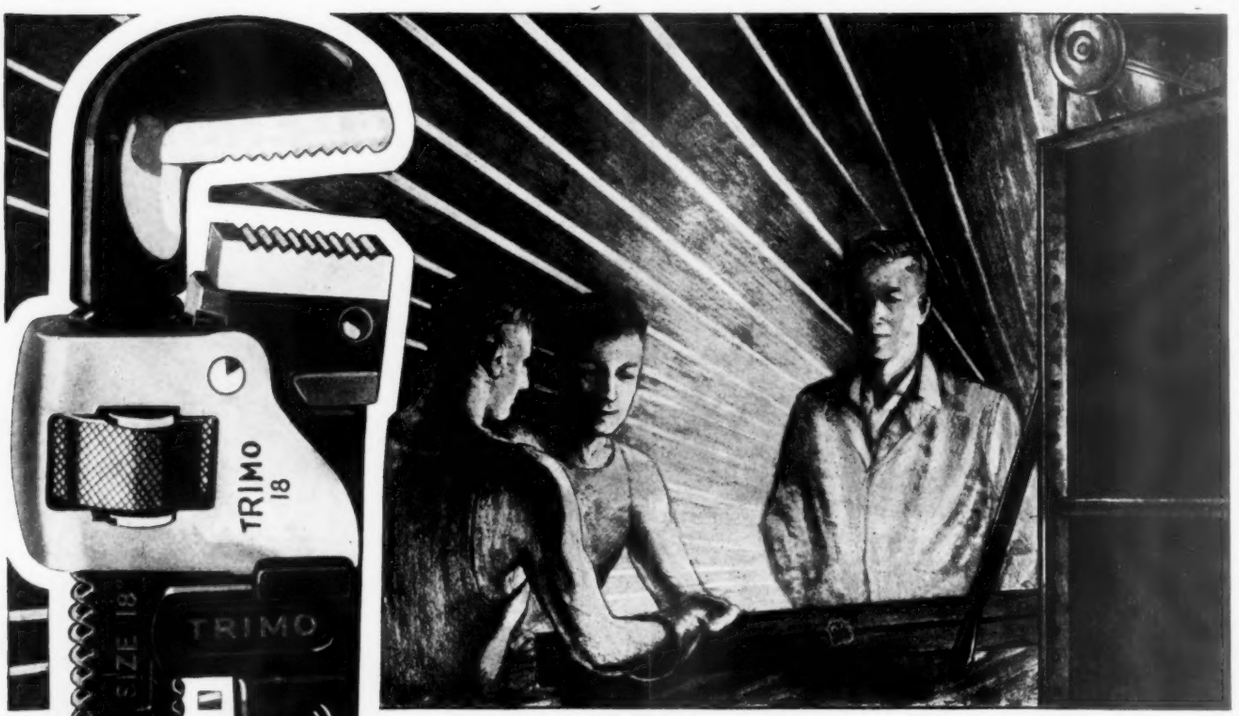
CONTINENTAL



HEAT TREATED

by men who know how

The tremendous strength of the TRIMO handle is the result of the most modern scientific processes applied by men whose heat treating experience goes back many years.

In over forty years of wrench making, a background of experience and an expert personnel have been developed to keep the TRIMO wrench well out ahead of the crowd. The constant improvement in manufacturing methods and the constant watchfulness of men who are thoroughly familiar with the metal working problems at hand have made TRIMO the safest, most dependable and economical tool in the wrench line.

ALL STEEL TRIMO PIPE WRENCH

Handle drop forged --- not cast

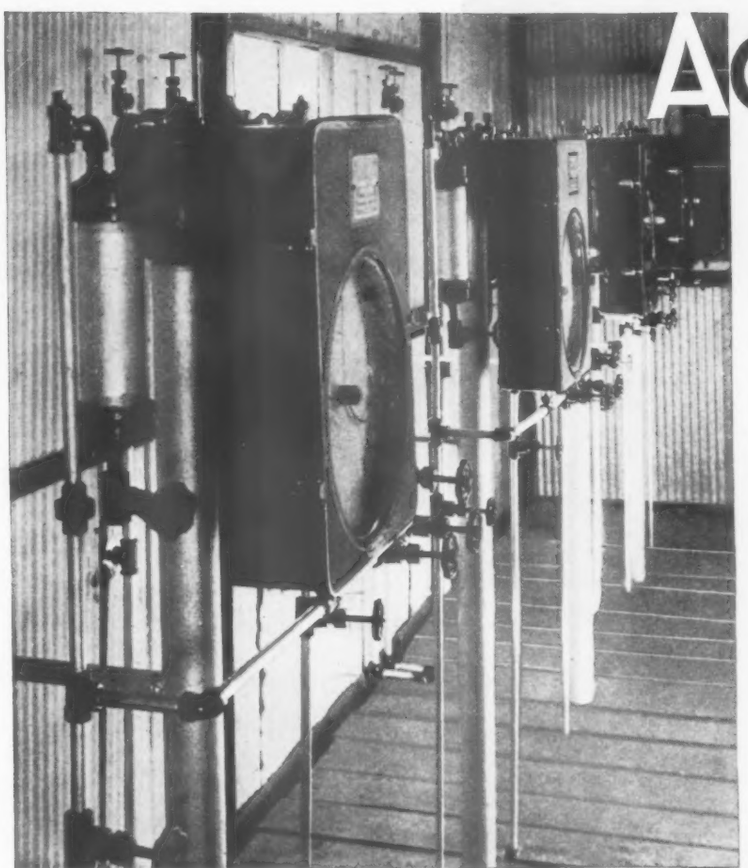
Made by

TRIMONT MFG. CO., INC.

ROXBURY (BOSTON), MASS.

CHIEF ADVISOR

IN MATTERS OF



ACCURACY

This new Alto Meter Station bears a large and important responsibility. Through seventy-six Westcott Meters, it measures all the gas which goes from Richland Parish to three major transmission lines: (1) The Interstate Natural Gas Company line from Fowler, La., to New Orleans extension at Baton Rouge, La.; (2) The Southern Natural Gas Corporation line from Louisiana to Atlanta; (3) The Mississippi River Fuel Corporation line from Louisiana to St. Louis.

The trustworthiness ot the Westcott Orifice Meter in important service is proved by a long record of accurate performance. Introduced by the Metric Meter Company in 1911, it anticipated the requirements of years to come. Soundness and efficiency, demonstrated under varying conditions, from then until now, justify the confidence with which it is employed on the great transmission lines and in the increasing problems of the gas industry today.

AMERICAN METER CO MEASUREMENT ENGINEERS CUBIC FEET

METRIC METERS

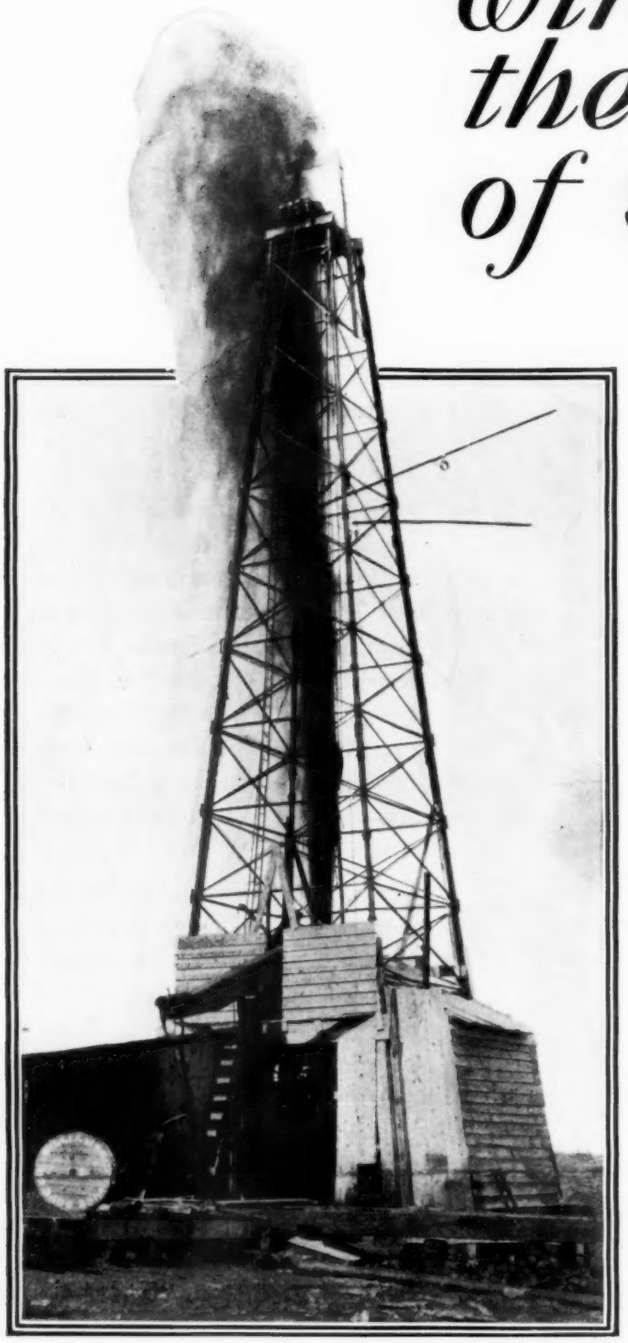
METRIC METAL WORKS
ERIE, PENNSYLVANIA
IRONCASE, TINNED STEEL CASE and ORIFICE METERS

AMERICAN METER COMPANY
INCORPORATED
The World's Largest Manufacturers of Gas Meters and Allied Apparatus
ESTABLISHED 1836

SALES AND SERVICE · ERIE · DALLAS · TULSA · DENVER · LOS ANGELES · SAN FRANCISCO · KANSAS CITY · PITTSBURGH · CHICAGO · PHILADELPHIA · NEW YORK · BALTIMORE · BOSTON · ALBANY

WILLIAMSPORT

Wire Lines -- the Sentinels of service!



Drillers in every field recognize the high standard of Williamsport Lines — and good drillers prefer them; because lines that stand out with such uniform quality, simply make their own work show up better, and for no other reason than their self protection, "Williamsport" should be demanded by *all* drillers.

We have specialized on drilling lines for over 25 years and know the real needs of drillers.

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Distributed by the Bridgeport Machine Company, Wichita, Kansas, and all of their Mid-Continent Branches

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Fittings
Dependable JARECKI Fittings! . . . . . Fittings that live up to the carefully guarded reputation of a 78-year company. Close-grained cast iron Fittings, free from imperfections. Air-furnace malleable Fittings. Clean-cut threads that bring a smile of satisfaction to the workmen. Isn't that the type of Fittings service you are interested in? . . . . . Our nearest store is at your service.
Jarecki
MANUFACTURING COMPANY
Home Office and Factory—ERIE, PA., U. S. A.
General Office—ST. LOUIS, MO.
District Offices—Pittsburgh, Pa.; El Dorado, Kans.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.
Branch stores at all important places in the Oil Country.

The *Obligation* of Leadership

It is an obligation to carry on—never resting on the laurels of past performance—never satisfied with any achievement. This is the obligation of leadership. An obligation Halliburton gladly accepts.

It's an obligation to the oil industry and to the individuals in the industry—an obligation to be ever on the alert for new methods—to be the first to introduce improved equipment.

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

Halliburton chemists are constantly engaged in Research and Experiment.

Would you, as a reader of THE OIL WEEKLY, like to receive copies of THE CEMENTER as issued? Each number contains interesting information about cementing and drilling fluids. There is no cost or obligation—simply sign your name below and mail to Halliburton Oil Well Cementing Co., Duncan, Oklahoma.

Name..... Address.....

SNOWBOUND?

never heard of it!

(thanks to the RUMELY DOALL Industrial Winch TRACTOR*)*

Balance! With the weight where the support is. That's the reason the Rumely DoAll Industrial Winch Tractor gets around in all kinds of weather with amazing ease. Special design and construction take the excess weight off the front wheels and distribute it correctly. Let us explain how we do it.

The DoAll is a rugged, compact, speedy four-cylinder machine for use at the well or around the refinery. It is much smaller than its companion, the OilPull, yet it will outpull and outmaneuver anything in the competitive class. Four speeds forward and two reverse give exceptionally high speed of line travel and tremendous lifting power. Ample brakeage for any size job. The DoAll will handle any job for which you do not feel the absolute need of the big, heavy-duty OilPull master tractor.

—Send all inquiries and orders to - - -

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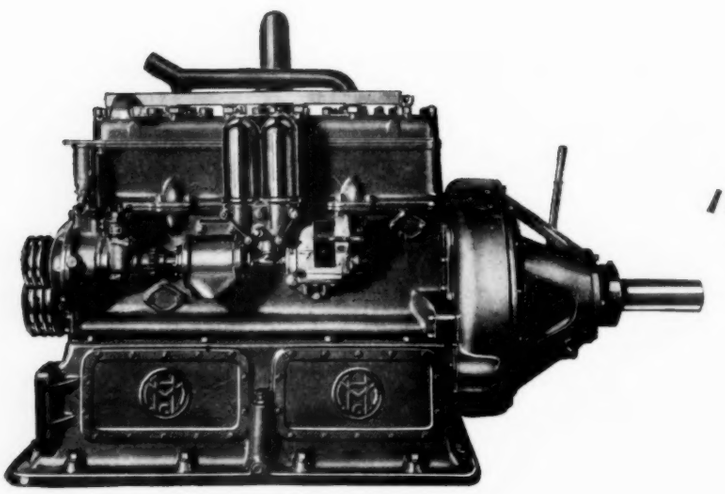
HERCULES ENGINES



THE "HX" SERIES OF SIXES

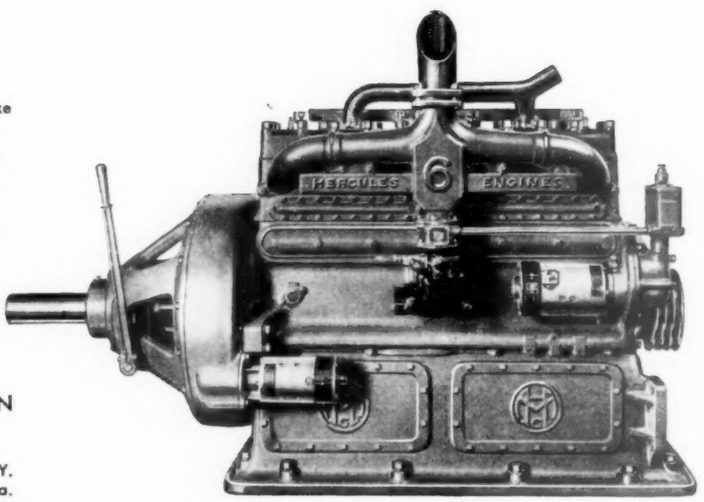
HERCULES "HX" Series Engines have been developed with a particular view to meeting modern requirements for heavy-duty, six-cylinder power in the higher horsepower ranges.

Like all Hercules Engines they are simple, rugged, advanced in engineering. Special attention has been given to effective cooling and lubrication. Full provision has been made for all possible accessories.

The reputation for all-around superiority which Hercules Engines have earned throughout the heavy-duty power field is still further enhanced by the "HX" Series Sixes. Complete information and details will gladly be furnished on request.

SPECIFICATIONS

Model	Cylinders	Bore	Stroke
HXA	6	4-3/4"	6"
HXB	6	5"	6"
HXC	6	5-1/4"	6"
HXD	6	5-1/2"	6"
HXE	6	5-3/4"	6"



HERCULES MOTORS CORPORATION
Canton, Ohio, U. S. A.

New York Office: Chanin Building, New York, N. Y.
Mid-Continent Office: Mayo Building, Tulsa, Okla.
West Coast Office: Russ Building, San Francisco, Cal.

JUMP INTO THIS

Too big and too tough to be captured in the test tubes of scientists is Time, that truthful old tester of everything in this world. Again and again he laughs at . . . and upsets . . . the calculations of those who try to judge the length of life of pipe by accelerated methods.

No laboratory walls can hold . . . no instruments can measure . . . the multitude of mighty forces which Time commands in the tests of ACTUAL SERVICE. That's why leading engineers agree that the only true measure of pipe longevity is life.

In the tests of Time, Reading Genuine *Puddled* Wrought Iron Pipe has proved beyond question its longer life; Reading 5-Point Pipe installed twenty . . . thirty . . . forty and more years ago is still good today! Buy the pipe that Time has *fully* tested—you are *sure* of pipe dependability with Reading Genuine *Puddled* Wrought Iron Pipe.

As an added improvement, all Reading Galvanized Couplings for Reading 5-Point Tubing are now furnished with galvanized threads.

READING IRON COMPANY, Reading, Pennsylvania

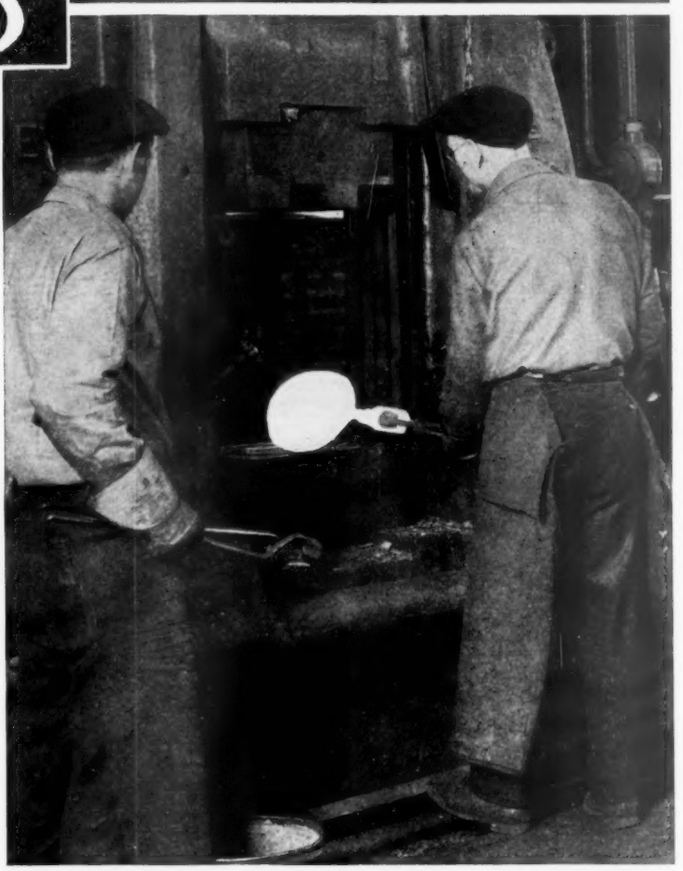
For Your Protection
This Indented Spiral
Forever Marks All
READING PIPE

GENUINE PUDDLED WROUGHT IRON
READING · PIPE
DIAMETERS RANGING FROM ⅛ TO 24 INCHES

Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Wrought Iron

EDWARD VALVES

One of the drop forging hammers turning out forgings for Edward valves.



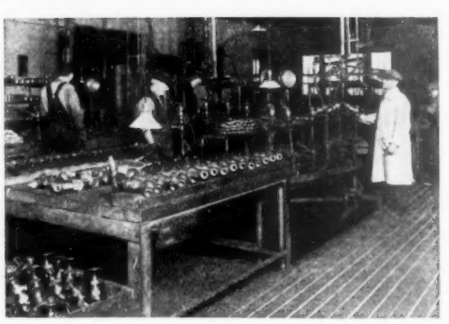
Lower Cost— Higher Quality

Improving the quality of Edward valves is a tradition. Constant betterment of past performance by upward revision of material specifications without increased cost, is one reason why Edward valves are specified by engineers whose purchases are made entirely on a performance basis. Rigid conformity to close working tolerances, enforced by eagle-eyed inspection, assures unvarying adherence to carefully determined standards.

THE EDWARD VALVE & MANUFACTURING CO.
East Chicago, Ind.

No. 2688, for pressures up to 600 lb., is of forged special carbon or alloy steel. Swivel plug disc and seat of EValloy (stainless steel) or EValnite (Nitralloy as processed by Edward). Many of the leading refineries and power plants are users of this valve which has proved economical to maintain.

Every Edward valve is tested with high pressure water and with air, both above and below the disc, and then given an overall visual inspection.



Trade Mark Reg. U. S. Pat. Office

May Be Rolled Like a Barrel!

When the Improved AMERICAN Oil and Gas Separator was being planned, not only were the major features taken into consideration, and special devices designed and perfected for greater efficiency, but even the minor parts were analyzed!

These Separators were, therefore, designed so that they may be rolled like a barrel, when transported, or otherwise handled. There is nothing to break off, or become damaged.

The saving in connecting-up time is also an item not to be overlooked. The fittings are lower, allowing a greater convenience in hook-up and saving in pipe materials.

The Improved American Oil and Gas Separator

Equipped with the B. S. & B. Spray Condenser

AMERICAN EQUIPMENT Always Dependable.

B S & B Products

This Separator was designed for a purpose. It was not built on conjecture, but engineered, and the natural forces of velocity, gravity, and centrifugal force are used to full advantage. Therefore, this Separator efficiently removes all the pipeline oil from the gas.

Thus a fool-proof, safe Separator of greater capacity which assures *BONE-DRY GAS*. Since these Separators were announced only a few months ago, numerous installations may be found throughout the Mid-Continent and Rocky Mountain Fields.

May we prove their performance-ability? Give consideration to the AMERICAN, and let us present more facts through a Representative, a letter or literature. Please address Dept. AA-16.

American Tank & Equipment Corp.

A SUBSIDIARY OF
BLACK-SIVALLS & BRYSON, Inc., Bartlesville, Okla.
OKLAHOMA CITY — OKLAHOMA

Formerly AMERICAN TANK COMPANY

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HARDEST DRILLING in U.S. MADE EASIER

One of the Kettleman Hills' wells, showing the drill pipe in foreground equipped with Bettis Protectors.

At Kettleman Hills, the toughest drilling area in the U. S., where formidable obstacles are encountered, Bettis Protectors are indeed a necessity. Several of the wells have required eight or nine months of hardest drilling inside of the casing—a condition that would make drilling costs prohibitive were it not for Bettis Protectors. All active Kettleman wells are Bettis-equipped.

PATTERSON-BALLAGH CORPORATION

Insurance Exchange Building, Los Angeles

Texas and Gulf Coast Distributors: **Bettis Sales Co.**, 917 Merchants & Mfrs. Bldg., Houston

Oklahoma Distributors: **Bailey and Becker Company**, 410 Thompson Bldg., Tulsa

New York Office: 39 Cortlandt Street

Carried in stock at Los Angeles, Ventura, Kettleman Hills, Bakersfield, Coalinga and Long Beach, California; Tulsa and Oklahoma City, Oklahoma; Houston, Texas; Hobbs, New Mexico; Calgary, Alberta, Canada; New York City.

BETTIS PROTECTORS

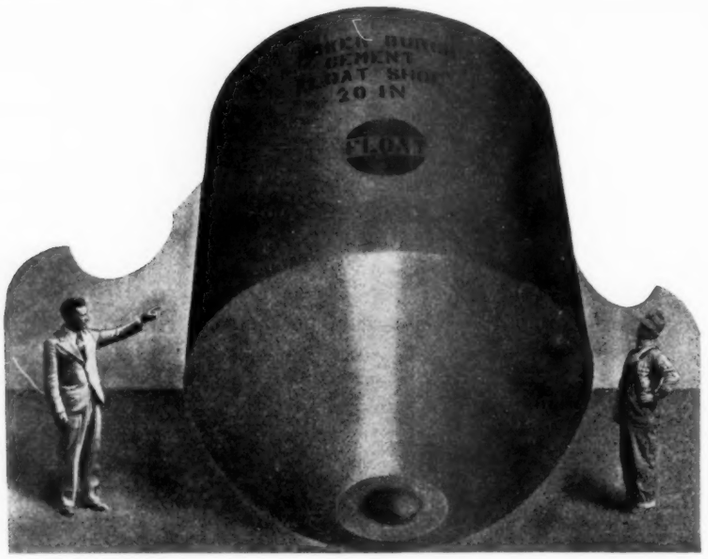
and DRILL STABILIZERS

IDEAL

"Reg. U. S. Pat. Off."

SPIRALOY SPROCKET CHAIN

THE NATIONAL SUPPLY COMPANIES



If You Use Baker Cement Float Shoe on "Big Inch" You can Disconnect Cement Head and Break Down Immediately After Cement Run is Completed

There are a number of advantages in using the Baker Cement Float Shoe when you are cementing "big inch," aside from the increased safety which is an inherent part of the use of Baker Cement Floating Equipment.

Immediately after the cement run is completed you may take off the cement head and start breaking down, the back-pressure valve in the Baker Cement Float Shoe taking care of any pressures which may be developed.

It takes time to put the clamps on and land the pipe, cut it off, weld in the flow line for circulation, set the rotary table back in its place, and get ready for the next run.

Even if the time saved through the use of the Baker Cement Float Shoe is only one day, you are just that much further along, and time saved is money saved.

No matter what the size, or how great the weight of your string of "big inch," the Baker Cement Float Shoe will handle it safely. The Baker-Formula Concrete used in its construction has tremendous strength, and will not shatter or fracture while guiding the string down the well.

O. D. Size	Nominal Size	A.P.I. Size
13"	12½"	..
..	..	13⅜
14	13½	..
16	15½	16
18"	18"	..
..	..	18⅝
20	20	..
21½	..	21½

Export Sales Office:
Room 736, 25 Broadway,
New York, N. Y.

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SPENCER W. ROBINSON, EDITOR

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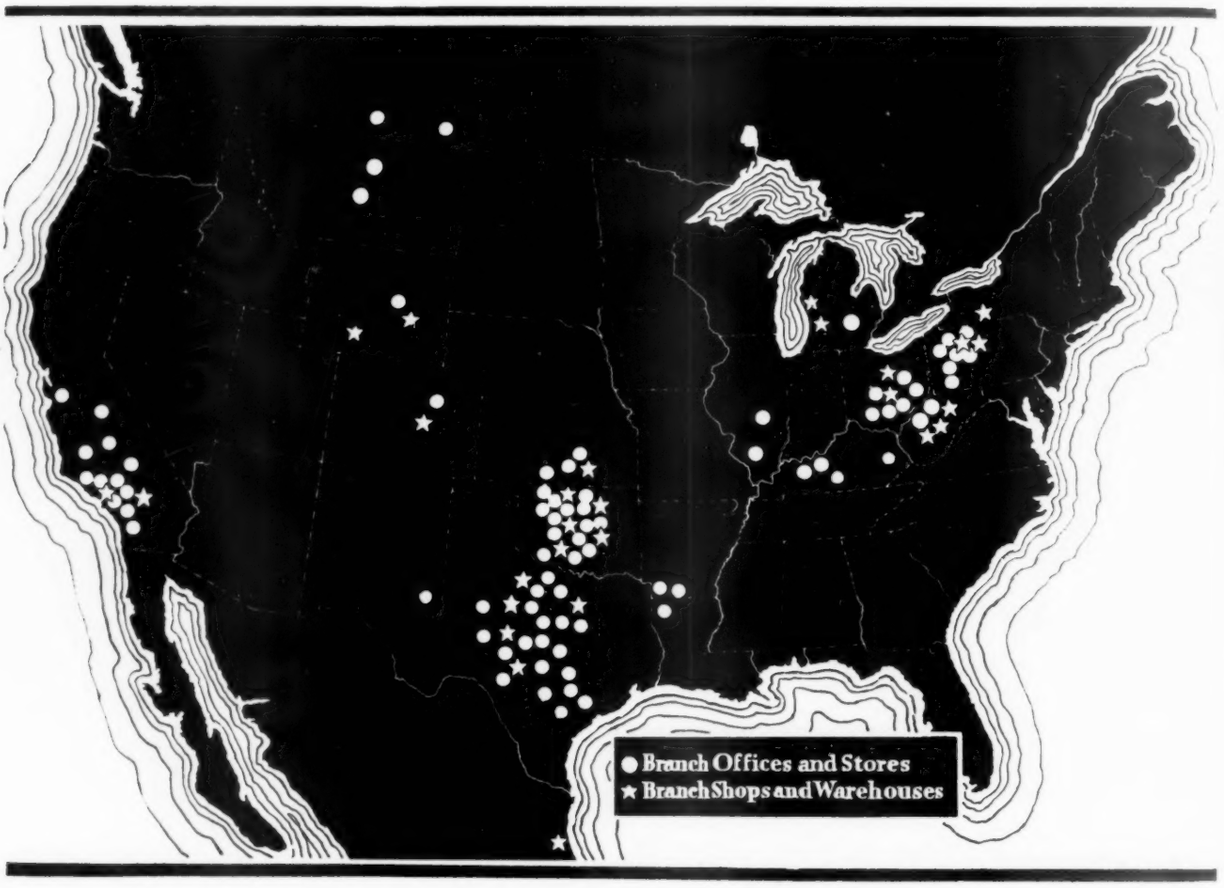

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THE OIL WEEKLY

VOLUME 60, NO. 4 JANUARY 9, 1931

Prairie Explains Curtailment *Of* Crude Purchases

TULSA.—As a result of Prairie Oil & Gas Company's withdrawal as a general purchaser of crude, owners of several thousand small wells in Northeastern Oklahoma and Eastern Kansas were practically without an outlet on January 1. A committee of purchasers was appointed December 27 by E. B. Reeser, president of the American Petroleum Institute, to work out a plan, if possible, whereby relief could be granted the owners of small wells who would otherwise be without connections on January 1. The committee, through its chairman, R. M. Young, president, Carter Oil Company and Oklahoma Pipe Line Company, reported that various companies had agreed to purchase one-half of the distressed production provided Prairie Oil & Gas Company would remain in the market and take the other half. W. S. Fitzpatrick, chairman of the board of Prairie Oil & Gas Company, announced the attitude of his company in the following statement to Mr. Reeser:

W. S. FITZPATRICK
Prairie's Chairman

"I have received your letter of December 26, together with the report of a committee representing purchasers of crude oil in the Mid-Continent field which met for the purpose of suggesting some means to provide a market for the so-called distressed oil from the small wells in Eastern Kansas and Northern Oklahoma, together with a list of the members of the committee. I note among the companies represented in this conference were Standard Oil Company of Indiana, Standard Oil Company of New Jersey, Gulf Refining Company, The Texas Company, Shell Petroleum Corporation, Tidal Refining Company, Pure Oil Company and the Empire Companies.

"I am unable to determine, from the report which you hand me, anything indicating the amount of oil each of these companies would agree to purchase or where they would require delivery of the oil to. In the meeting which I attended, at which all the members of this committee were present, on December 26, in the office of the Mid-Continent Petroleum Association at Tulsa, many of the members of your committee, if not all of them, disclaimed any desire to purchase any of this oil for the reason that they were able to supply their needs for crude oil from other sources. It may be interesting, and I think it is proper, for me to call the attention of yourself and your committee, to the fact that during the month of January, 1930, Prairie Oil & Gas Company was selling and delivering to Prairie Pipe Line Company for shipment on orders to Imperial Oil Company of Canada, a subsidiary of Standard Oil Company of New Jersey, 16,000 barrels per day, to Standard Oil Company of Louisiana, a subsidiary of Standard Oil Company of New Jersey, 18,000 barrels per day, and to Standard Oil Company of New Jersey, for delivery to its plant at Parkersburg, West Virginia, 4500 barrels per day, making a total of 34,000 barrels per day which we were then selling to Standard Oil Company of New Jersey and its subsidiaries.

"At the same time we were selling to Pure Oil Company, for delivery at Cabin Creek, West Virginia, 1000 barrels a day and 2000 barrels per day for delivery at Heath, Ohio, making 3000 barrels a day we were then selling to Pure Oil Company.

"At the same time we were selling to Paragon Refining Company, in like manner, 4000 barrels per day for delivery at Toledo, Ohio, and Paragon Refining Company was, during the latter part of the year 1930, purchased and taken over by Gulf Refining Company.

"During the same time, January, 1930, we were selling and delivering to Prairie Pipe Line Company for transportation to Standard Oil Company (Indiana), 50,000 barrels per day for delivery at Whiting, Indiana; 26,000 barrels per day for delivery at Wood River, Illinois, and 3000 barrels per day for delivery at Sugar Creek, Missouri, making a total of 79,000 barrels per day which we were then selling to Standard Oil Company of Indiana.

"At the same time, during the month of January, 1930, we were delivering to Prairie Pipe Line Company oil sold to Standard Oil Company of Ohio at the rate of 8200 barrels a day for delivery at Toledo, Ohio; 13,000 barrels per day for delivery at Cleveland, Ohio, and 5000 barrels per day for delivery at Latonia, Kentucky, making 26,200 barrels per day that we were then selling to Standard Oil Company of Ohio, and at the same time we were selling to Vacuum Oil Company, for delivery on board tankers at the Gulf, 7000 barrels per day of Ranger, Texas, crude.

(Continued on page 26)

November Oil Statistics Reflect Improvement

By H. J. STRUTH
Staff Economist

THAT the petroleum industry is rapidly getting its house in order is shown by analysis of its salient factors for November and the 11 months of last year, compared with the same periods of the preceding year. Comparison of the accompanying barometer chart with the one for October, which appeared in the December 19 issue of THE OIL WEEKLY, reveals a number of constructive changes. Aside from a sharp upturn in new oil production, the indices of supply and demand receded further during November, effecting a shortening of the bars that protruded above the 100 line. Particularly encouraging are the changes marked by gasoline imports, gasoline production, gasoline yield from crude, gasoline consumption and gasoline stocks. On a cumulative basis, however, the changes for November have had but a slight influence and the index numbers plainly show that continued curtailment effort is necessary to bring about a desired state of equilibrium in all departments of the industry.

Of particular interest to the producer is the fact that a barrel of Mid-Continent, 36 gravity, crude during the 11 months ending November 30 was worth on an average of $1.24, whereas the present posted price for this grade of oil is but 95 cents a barrel. For the 11 months ending November 30, 1929, the average value of this grade of oil was $1.36, compared with an actual value during the month of November of $1.45. This means that the sale of one barrel of this oil every day during the 11-month period would have brought a revenue to the producer of $413.12 during 1930, compared with a revenue of $452.98 during the same period of 1929. As a matter of fact, a barrel of this crude sold every day throughout 1930 brought a total revenue of $442.57, compared with a total revenue during 1929 of $497.93, or a net loss to the producer during the past year of $55.36 a barrel. At that rate, a producer with a daily pipe line outlet of, say, 2000 barrels, suffered a loss in revenue last year of approximately $110,720.

While the bar indicating initial crude oil production appears unfavorable on the chart, it is apparent that this factor cannot be construed as having a direct effect upon the supply situation. In fact, it has only an indirect effect in that the quantity of new oil developed in flush fields is being shut in as rapidly as it is found. Nevertheless, it is obvious that the unusual success attending field development continues to build up a potential production that exerts a menacing influence upon the oil situation. It will be noted by the accompanying figures that the number of wells completed during the 11-month period of last year shows a decline of 3398 under 1929. Nevertheless, initial oil production increased 3,851,000 barrels. The fact remains, however, that about 45 per cent of the new flush oil production brought in last year originated in the Oklahoma City field. Fortunately, the enormous potential production of the Oklahoma City field is being closely guarded by the proration forces of that state. Under these conditions the prominence of the initial production bar on the chart is not of immediate consequence in the general picture.

The strides made during the closing months of the year in the curtailment of crude production and refinery runs stand out as evidence that the industry is definitely effecting a much needed balance between supply and demand. Daily average crude production for the 11-month period was down 291,000 barrels daily, while the rate of production during November shows a decline of 353,000 barrels daily under that of November, 1929. Similarly, refinery runs of crude have been curtailed to the extent of 51,179,000 barrels during the 11-month period, while the month of November shows a decline under the same month of 1929 of 10,751,000 barrels. It is particularly interesting to note that both crude production and refinery runs had been curtailed to the same degree during the month of November, as compared with that month of 1929; the index standing at 87 per cent for both. On a cumulative basis, however, refinery runs are still four per cent above the rate of curtailment attained by the producing branch of the industry.

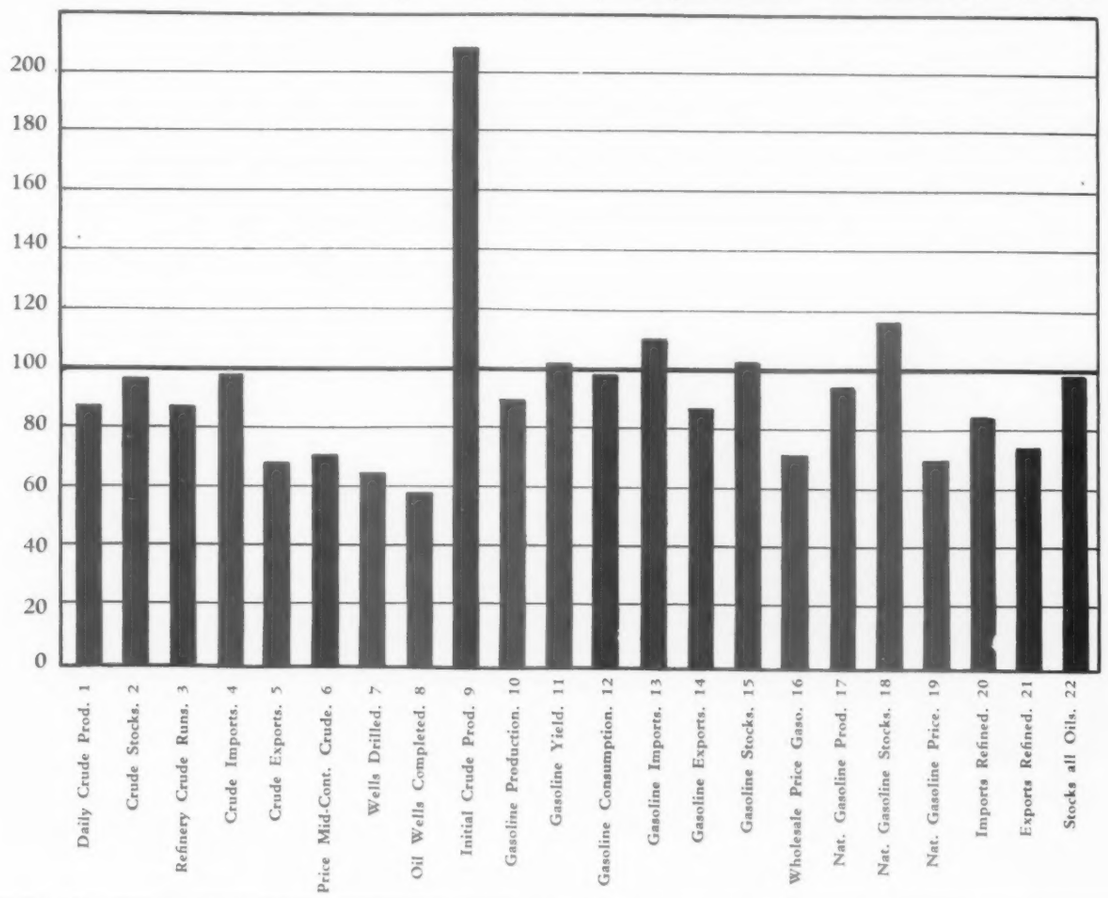
Balance Being Effected

Summed up, the factors of supply indicate a gain of 17 per cent over 1929, while demand is about the same as for the preceding year, with the price factors nine per cent below the rates in effect during 1929. Crude stocks have been reduced 21,667,000 barrels but gasoline stocks are still two per cent above the preceding year while natural gasoline stocks have mounted to the point where they exceed stocks of 1929 by 16 per cent. Domestic gasoline demand shows a gain over 1929 of only five per cent, but reference to the February 21, 1930, issue of The OIL WEEKLY, wherein the writer presented his estimate of the 1930 gasoline demand, shows that the anticipated demand for the first 11 months of the year amounted to 364,489,000 barrels, whereas the actual domestic demand for that period proved to be 366,466,000 barrels, or 1,977,000 barrels more than anticipated. On the other hand, the writer estimated a total gasoline demand, including exports, of 434,184,000 barrels for that period, whereas the actual total was 427,701,000 barrels. It is apparent from these figures that the industry's exports of gasoline were considerably below expectations and subsequent developments showed that the foreign gasoline market was displaced in part by increased shipment of South American and Russian gasoline to former European outlets for American gasoline. This situation, combined with the receipt of South American gasoline into the United States has directly affected the industry's gasoline supply situation during the past year.

It will also be noted that exports of all refined oils during the 11-month period were smaller than in the preceding year, while crude exports also had shown a substantial decline. In view of conditions in Russia and South America it is believed that our crude exports will become even

(Continued on page 54)

Salient Oil Industry Factors for November, 1930, Expressed in Per Cent of November, 1929. Heavy Line (100) Represents November, 1929.



OIL INDUSTRY BAROMETER

Index of Salient Factors — Current and Cumulative
November, 1930

	Factors—	This Month — Last Year	This Month — This Year	This Month — Index (a)	11 Months Ending Nov. 30 — Last Year	11 Months Ending Nov. 30 — This Lear	11 Months Ending Nov. 30 — Index (a)
1	Daily Average Crude Production (Thous. Bbls.)	2,625	2,272	87	2,774	2,483	90
2	Total Crude Stocks (Thous. Bbls.)	539,837	518,170	96	539,837	518,170	96
3	Refinery Crude Runs (Thous. Bbls.)	81,061	70,310	87	907,045	855,866	94
4	Crude Imports (Thous. Bbls.)	4,554	4,467	98	73,047	57,402	79
5	Crude Exports (Thous. Bbls.)	2,579	1,765	68	24,312	22,367	92
6	Posted Price 36 Gravity Mid-Continent Crude (Per Bbl.)	$1.36	$ .95	70	$1.36(b)	1.24(b)	91
7	Wells Drilled*	1,965	1,253	64	21,275	17,877	84
8	Oil Wells Completed*	1,139	644	57	12,193	9,862	81
9	Initial Crude Production* (Thous. Bbls.)	434	901	208	4,974	8,825	177
10	Gasoline Production (Thous. Bbls.)	37,700	33,616	89	401,659	407,182	101
11	Gasoline Yield—Average per cent of crude (d)	41.24	41.67	101	39.19	41.98	107
12	Domestic Gasoline Consumption (Thous. Bbls.)	31,584	30,984	98	348,818	366,466	105
13	Gasoline Imports (Thous. Bbls.)	984	1,079	110	8,118	15,963	197
14	Gasoline Exports (Thous. Bbls.)	4,219	3,690	87	56,054	61,235	109
15	Gasoline Stocks at Refineries (Thous. Bbls.)	37,997	38,705	102	37,997	38,705	102
16	Refinery Price U. S. Motor Gasoline, Group 3 (Cents)	7½	5 1/3	71	7⅞(c)	6½(c)	83
17	Natural Gasoline Production (Thous. Bbls.)	4,504	4,238	94	47,814	47,538	99
18	Natural Gasoline Stocks (Thous. Bbls.)	514	596	116	514	596	116
19	Price Grade "A" Natural Gasoline, Group 3 (Cents)	6½	4½	69	7¼(c)	5½(c)	76
20	Imports of all Refined Oils (Thous. Bbls.)	3,327	2,807	84	27,374	40,176	147
21	Exports of all Refined Oils (Thous. Bbls.)	10,565	7,776	74	124,398	123,231	99
22	Total Stocks of all Oils (Thous. Bbls.)	685,708	672,806	98	685,708	672,806	98
	Weighted Index of Supply	.....	.....	107	.....	.....	117
	Weighted Index of Demand	.....	.....	83	.....	.....	100
	Weighted Index of Prices	.....	.....	70	.....	.....	91

*Exclusive of Rocky Mountain area.
(a)—Last Year—100
(b)—Weighted Average.
(c)—Monthly Average.
(d)—Straight run and cracked gasoline only.

While the Prairie Oil and Gas Company is "looking around for a market outlet for its crude oil" no negotiations have been concluded at any point. W. S. Fitzpatrick, Chairman of the Board of the Prairie Oil and Gas Company, informed The OIL WEEKLY over long distance Tuesday afternoon.

Reports that the Prairie is about to build a refinery are erroneous, Mr. Fitzpatrick said.

"We may perhaps acquire a refinery or build one but have reached no decision at this time," he said. "We are simply looking around for an outlet for our crude supply."

(*Continued from page 23*)

Thus it will be seen that the companies represented by your committee, or those acquired by them since January 1, 1930, were at that time purchasing through Prairie Oil & Gas Company from these so-called stripper wells and others, 150,000 barrels per day, as Vacuum Oil Company does not appear to have been represented on your committee. At the present time the only one of the above mentioned companies who are now purchasing any part of their requirements from Prairie Oil & Gas Company is Standard Oil Company of Indiana, which is at present taking from us 10,000 barrels per day, but they have advised us that as soon as they can make connection of their own pipe line with that of Prairie Pipe Line Company they will supply such amount to their Wood River refinery from their own sources of supply.

"It might be illuminating to mention the fact that during the month of June, 1930, these companies actually ran through their refineries Mid-Continent oil secured from these small so-called stripper wells and others, as purchased by Prairie Oil & Gas Company, 141,300 barrels daily. Gradually the takings by these companies of Mid-Continent oil, through the agency of Prairie Oil & Gas Company, has declined until today they have assured us that they can no longer furnish us a market for any of this oil.

"The outline of the extent of business that we have been doing with the companies mentioned over a period of many years led us in the past to build up a source of supply consisting of oil in storage and producing properties to provide ample security to our customers for crude oil under any and all circumstances in the matter of crude supply for their refinery operations, and likewise Prairie Pipe Line Company, the only available medium of transportation from the field to them, has extended its gathering lines throughout all parts of the field with more concern to service than to immediate profit in the case of each extension.

Must Have Outlets to Purchase

"We appreciate the fact that our business relations and contact have been on the whole most agreeable and satisfactory with our patrons, both those to whom we sold crude oil and those from whom we bought it, and regret that the economies of the situation, about which we have recently heard so much make it impossible for us to continue serving them because we cannot serve the producer as a marketing agency unless we have outlets for the product which we buy from them.

"All the concerns represented on your committee own and operate refineries, bulk and filling stations, and pipe lines. We have none of these, and if the gentlemen who have all these facilities are so over-burdened with an existing economic situation that they cannot afford to buy oil from the producers who have been serving them and us for years, or them through us, I do not see how any fair-minded person can expect us to do so.

"As you may ask what became of these markets and outlets which we had a year ago and have lost, I need only quote from the December issue of 'The Lamp,' a Standard Oil publication, in regard to its recently constructed Ajax pipe line, the following:

"'Present arrangements contemplate delivery of the oil by Illinois Pipe Line Company and other eastern carriers from Wood River to the Standard Oil Company (Ohio) refineries at Toledo, Cleveland and at Latonia, Kentucky; Pure Oil Company refineries near Charleston, West Virginia; Toledo, Heath and Newark, Ohio; Standard Oil Company of New Jersey plant at Parkersburg, West Virginia, and the Imperial Oil Company refinery at Sarnia, Canada.

"'Considerable comment of a highly complimentary nature has been aroused over the remarkable speed and almost military precision with which the lines were laid. Credit for the achievement very properly goes to H. S. Austin, president, and the entire Ajax organization, who worked at double time to bring the project through in the short space of six months. A dinner was given recently in St. Louis by Ajax Pipe Line Company in honor of Mr. Austin and to celebrate the record completion of the line. In addition to Mr. Austin, E. J. Sadler, vice president of Standard Oil Company (New Jersey); T. R. Armstrong, president of Standard Oil Company of Bolivia; J. R. Doles, vice president and general manager, and A. H. Weiagerber, vice president of the Ajax; C. L. Bushnell and S. V. Kane, secretary and treasurer, respectively, of the Ajax; J. A. Heath, vice president of Humble Pipe Line Company; M. M. Stuckey, manager of the construction and machinery contractors, were present.'

Indiana Has Own Line

"In addition to this, it is generally known that the Standard of Indiana, through the purchase of the Sinclair pipe line, has ceased buying from Prairie Oil & Gas Company the 79,000 barrels per day formerly taken from us, which was a great help in making it possible for us to take care of these so-called stripper producers. It has been said that somebody expected that the Sinclair interests would take their supplies of crude from Prairie upon selling their pipe line interests to the Indiana company, but such arrangement has not yet been consummated and is not in prospect, with the exception that arrangements have been tentatively made for Prairie Oil & Gas Company to supply the amount of oil required by the Sinclair plant at South Chicago for a few weeks until the facilities of Sinclair Refining Company are available to furnish such supply.

"As your committee knows, Prairie Oil & Gas Company has for a long time traded oil wherever it could be done to help the general situation in the Mid-Continent field and wherever we can do so without injury to ourselves or others we will continue to co-operate with your producers and purchasers of crude oil, but all the oil that we produce or buy we have to sell to refiners who compete with the refineries owned and operated by the companies represented on your committee and we cannot, as your committee well knows, charge our customers more for the oil delivered to them than the refineries of the companies represented on this committee pay for their crude cupplies.

"We have, in years past, gone far indeed to accommodate the producers of crude oil and those who purchased it through us but we cannot agree to a proposition which inevitably entails a loss to us or our customers and inures to the benefit of our competitors or theirs. People cannot buy oil from us at a higher price than they can buy it from Standard Oil Company and compete with that same Standard Oil Company in the sale of its products in markets dominated by Standard Oil Company and Gulf Refining Company.

(*Continued on page 54*)

Maintenance of Pressure *At* Raccoon Bend

By G. H. L. KENT
Humble Oil & Refining Company, and
GEORGE REID
Staff Representative The OIL WEEKLY

CONSERVATION, the key note of present day production, has resulted in a wide-spread demand in the oil industry for the utilization of the enormous amounts of gas produced with the oil. Inasmuch as the present market for gas is supplied largely from dry gas fields, a large amount of the gas produced with oil has been wasted. The successful utilization of this wasted gas is the solution to the gas conservation problem.

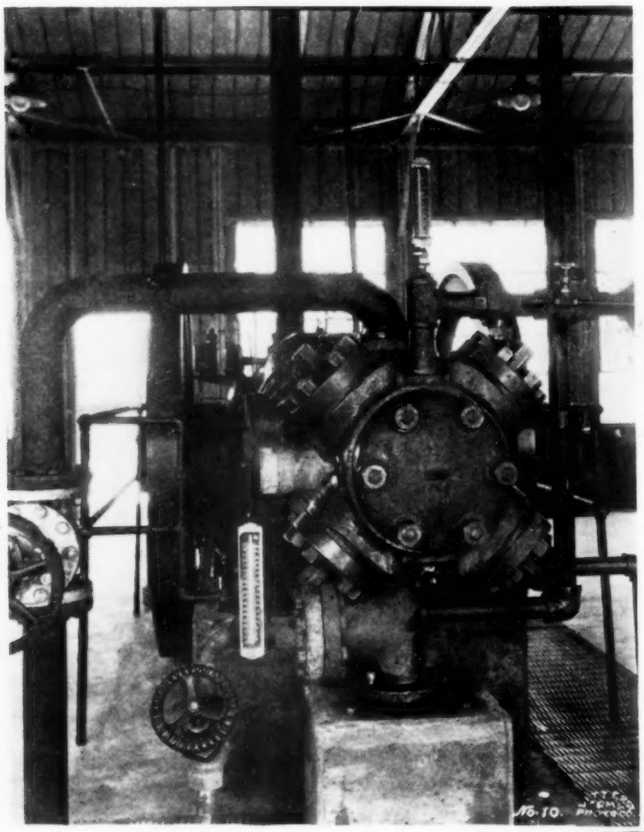
One of the first steps in conservation is the recovery of the greatest possible production from the present producing formations. Gas in nearly every instance is the medium by which oil is produced; therefore, the proper use of this waste gas is to recover the greatest amount of oil from the present producing formations. To effect this, Humble Oil & Refining Company has installed gas conservation plants in two fields which they control in their entirety.

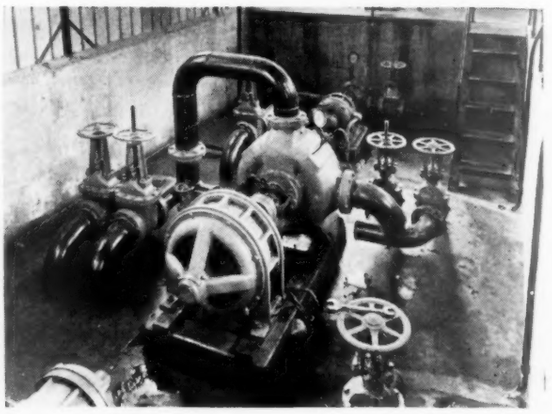
In the Raccoon Bend field, Austin, County, Texas, Humble Oil & Refining Company is completing one of these gas conservation plants of sufficient capacity to properly handle the entire gas production of the field. In the design, layout and construction of this plant every detail has been carefully planned in an effort to insure a finished installation which will meet with all the demands of good engineering practice.

The first of these conservation plants erected by the company is located in the Sugarland field, Fort Bend County, Texas. The installation of this plant has been discussed in THE OIL WEEKLY issue of November 9, page 49, under the title "Maintenance of Pressures at Sugarland."

Production in the Raccoon Bend field is obtained from two horizons, namely, the Gotoskey and the Grawunder. In practically every well, production seems to be coming

Interior Views of Compression Plant at Raccoon Bend



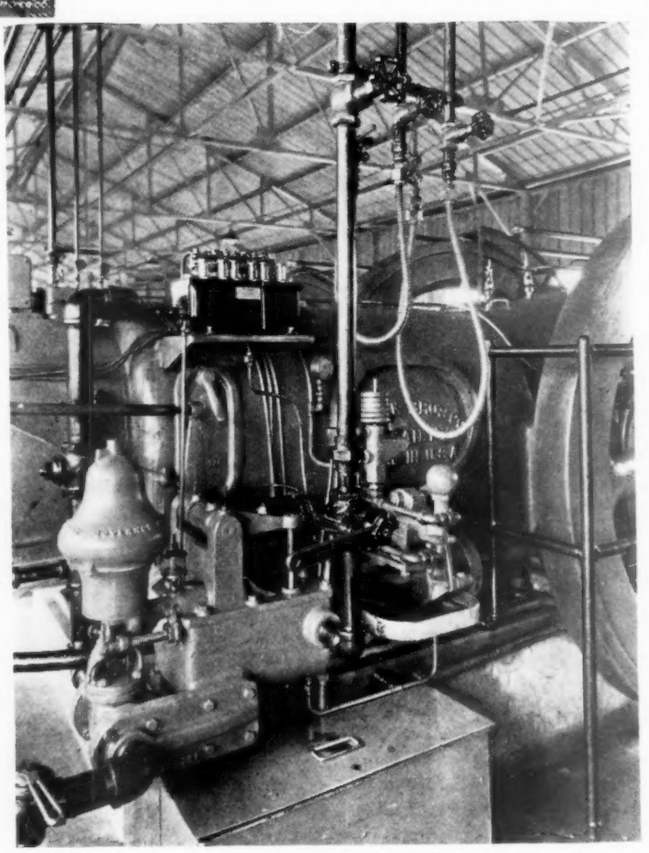


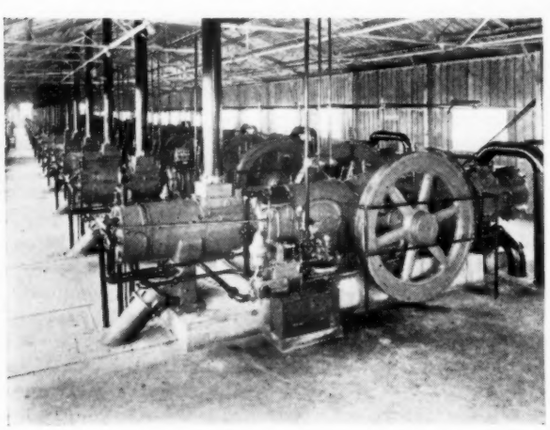
Above—Two centrifugal and one rotary pump, all motor-driven, are employed for the circulation of cooling water over the engine jackets, intercooler system and water cooling tower

Below—Lubricating oil of two grades is taken to each machine by means of two overhead lines running the length of the building. Details of the oil feed lines, automatic lubricators and oil filter installation are shown below

Above—Details of construction of the compressor head designed for operation at 2000 pounds per square inch. All machines are provided with indicating thermometers for checking operating temperatures

Below—Interior of compression plant at the Raccoon Bend pressure maintenance project of Humble Oil & Refining Company





from a definite body of sand from 18 to 25 feet thick, with zones of oil bearing but questionably productive sandy shale above and below. The Gotoskey sand is found between 2900 and 3140 feet, whereas, the Grawunder sand is found between 3250 and 3400 feet.

In the spring of 1929, although sufficient geological information was not available for laying out a comprehensive gas conservation and repressuring program, it was decided that some steps should be taken to conserve and use the gas being produced with the oil. Heretofore in the Gulf Coast fields, gas had only been produced in the early stages of production, the gas soon becoming depleted to such an extent that insufficient quantities were produced for field operation. After much consideration a small plant, capable of manufacturing gasoline and of supplying fuel for the drilling rigs, was installed at Raccoon Bend. Previous to this installation, fuel requirements had been withdrawn from an upper gas strata found at about 1000 feet. Therefore, the installation of the plant accomplished two purposes, namely, conserving the gas in the upper gas sand and at the same time utilizing the waste gas produced with the oil for fuel.

Make Study of Pressure

Early in the spring of 1930 it was decided that sufficient geological information had been obtained to show that conservation of gas and repressuring were feasible. Tests were made on several wells to determine what pressures were necessary for injection into the various sand lenses. The pressures required varied from 400 to 1300 pounds.

After careful study, the plant was built to handle 7,000,000 cubic feet of gas. This volume is compressed to the necessary pressures to handle injection into the different sands. Adequate arrangements were made to handle all the gasoline made incidental to the compression of the gas to the various pressures. This plant began operation July 27, 1930.

Before the plant was completed the total production of gas had increased beyond the capacity of the plant. This was due primarily to completion of new wells. Recently drilling has been curtailed and by well control and adoption of efficient production methods the output of the field has been held to a minimum. The methods used to lower the gas production included choking the producing wells, closing in the wells with high gas-oil ratios and otherwise controlling production of the field to secure the required production with the lowest gas-oil ratio. In this way, a large quantity of gas has been retained in the formation which otherwise would have been lost as a lifting medium and at the same time would have allowed a more rapid decline of formation pressure resulting in a lower ultimate yield.

The present plant will handle 9,000,000 cubic feet of gas daily, as follows: 9,000,000 cubic feet from 0 to 35 pounds of which approximately 725,000 cubic feet will be passed through a 35-pound absorber, the gasoline removed and the gas used as fuel for the absorption plant and engine fuel. The remaining 8,250,000 cubic feet will be compressed to 150 pounds and passed through 150-pound absorbers for the extraction of the gasoline; 1,250,000 cubic feet of this 150-pound gas will be compressed to 300 pounds for injection into a shallow sand zone; 1,000,000 cubic feet will be compressed to 500 pounds for induction at input wells taking gas at 500 pounds or lower; 2,000,000 cubic feet will be compressed to 1000 pounds and will be used for induction at input wells with induction pressures of 1000 pounds or less. Construction of the extension and absorption plant should be completed and ready for operation by February 15, 1931.

At present the field is producing about 8800 barrels daily with a gas production of about 8,000,000 cubic feet. About 70 per cent of the gas produced is returned to the pay zones.

High pressure gas for induction into the various key wells is taken from the different pressure headers at the plant. One line often serves more than one well. Individual high pressure meters are installed near the derrick floor. The amount of gas to each well is regulated by adjustable chokes installed in the down-stream side of the meter. After a well has been placed on induction, gas is injected through the tubing. As the adjustable choke is between the meter and the well, it is necessary to install recording gauges on the tubing in order to have an accurate record of the actual induction pressure. By installing the choke down-stream from the meter, freezing of the orifice plate is eliminated and more accurate readings of gas volumes are obtained.

The gas from the entire field is collected through gathering lines running to the plant. As each flowing well is equipped with an individual trap and meter, it is necessary that each well be tied directly into the gathering system at the down-stream side of the meter. However, central pumping traps have been installed on all leases with pumping wells and as each well goes on the pump, it is connected into the pumping manifold and traps. This manifold is so arranged that any pumping well may be cut into a test trap and test meter for individual test. It is, therefore, necessary that the gathering lines be tied into the down-stream side of both the regular and test meter settings. Pumping wells are hooked up so that both the tubing and casing gas are carried through the flow line with the oil from the well to the trap, thereby eliminating gathering-line casinghead connections.

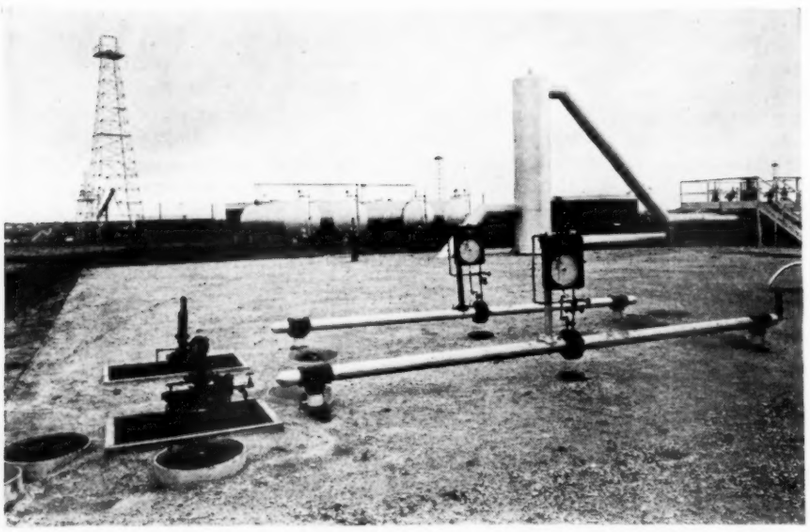
The various branch gathering lines from different sections of the field discharge the gas into a 20-inch header which conducts the gas into the plant. The gas from this header passes through a series of traps and regulators to the intake header.

A 20-inch gate valve is installed on the field side of the first trap or separator, which may be employed in case of emergency to block off the flow of gas to the plant. Located a short distance from the plant site is a six-inch relief valve by means of which the incoming or field gas pressure may be popped off anywhere between two and 16 pounds. This regulator is set at five pounds pressure; the pop-off gas is relieved through a six-inch diameter, 30-foot riser, which is large enough for any emergency that might arise at the plant.

The first trap, which is 4 x 20 feet in dimensions, is installed to remove all foreign matter from the incoming gas. Liquid accumulating in the bottom of this trap passes into a horizontal 20-inch x 20-foot accumulator tank from which it is blown to nearby storage tanks. After this separation the gas passes into a 20-inch line on into two diverging 12-inch lines provided with 12-inch pilot controlled regulators set to operate at a range of eight inches of vacuum to two pounds pressure. Through the center area of these diverging 12-inch lines there passes a 20-inch by-pass equipped with 20-inch gate valve, provided for emergency use.

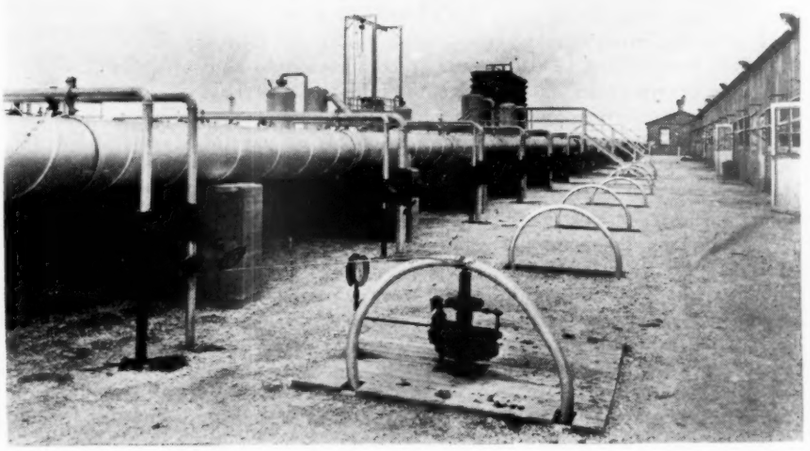
From the regulator station the gas converges back into the 20-inch line and through straight pipe, which is equipped with a straightening vane to eliminate swirls, thence through a 20-inch orifice meter setting. From the meter the gas passes into a second trap, which acts as a pulsation chamber. At this point the temperature of the incoming field gas is taken for checking the volume of gas handled. In the event of any gasoline or oil accumulation in the second trap, this liquid is discharged through a two-inch line to the accumulator tank located near the base of the

Mechanical Details of Humble's Pressure



Metering station and regulators measuring and controlling fuel gas to compression plant

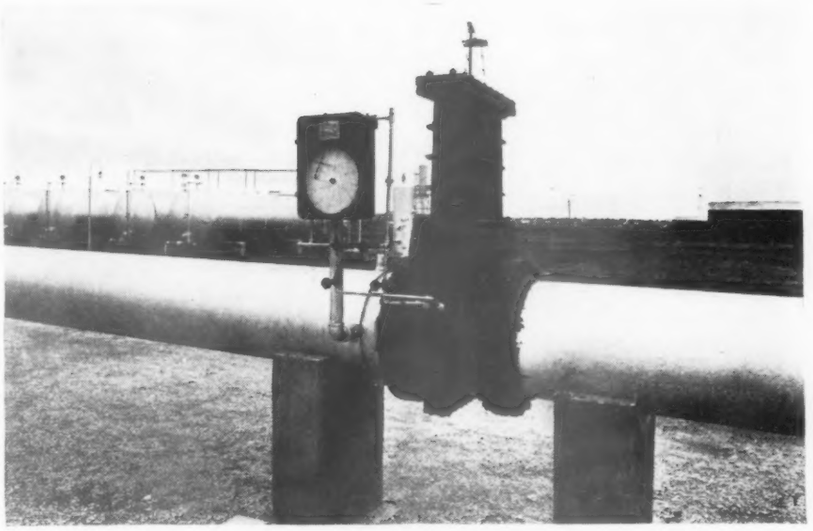
The gas header system is composed of spiral welded piping for handling low pressure gas, with the hot gas headers welded and the cool gas headers coupled with a binder type coupling. The high pressure header system is of welded four-inch piping with all transfer lines of two-inch size, welded connection and high pressure fittings. This photograph was taken from the high pressure side of the compressor plant. Two-inch expansion loops are installed to care for expansion of the high pressure gas lines

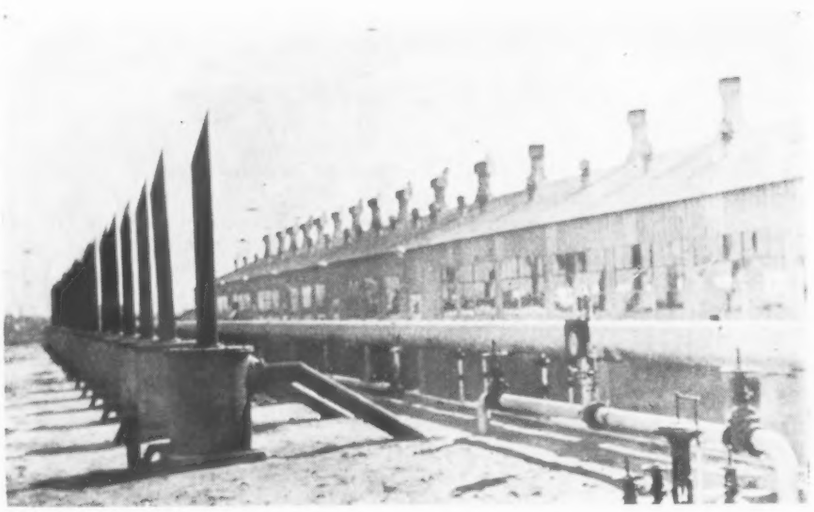


System of scrubbers or separators, and intercoolers for handling gas in compression stages of 35 pounds, 150 pounds and 1000 pounds pressure. Each separator is equipped with adequate safety relief valves. Each of the exchangers or intercooler units are provided with a whistle which will sound an alarm in the event of any gas leaks

Maintenance Plant in Raccoon Bend Field

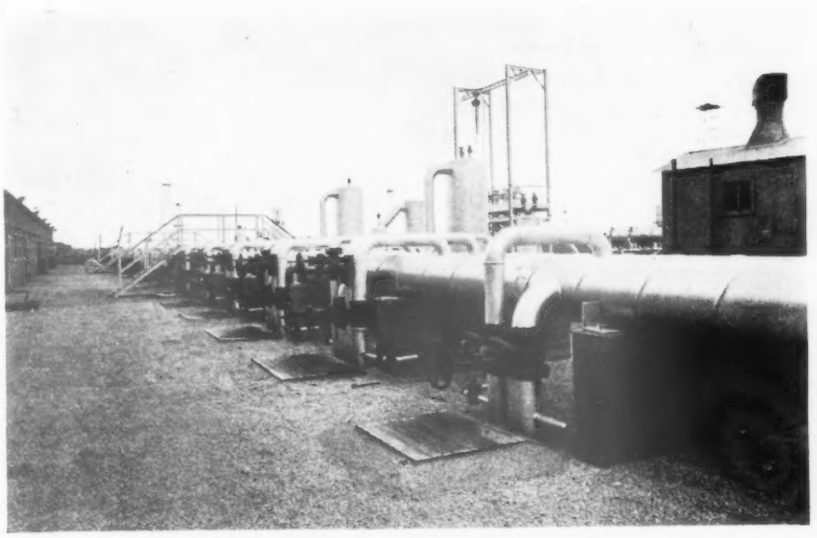
Gas entering the plant, after scrubbing, passes through a pilot operated regulator station, through a 20-inch line to the first header. The meter pictured to the right is the master meter for the plant, serving as a check against other field and plant measuring stations

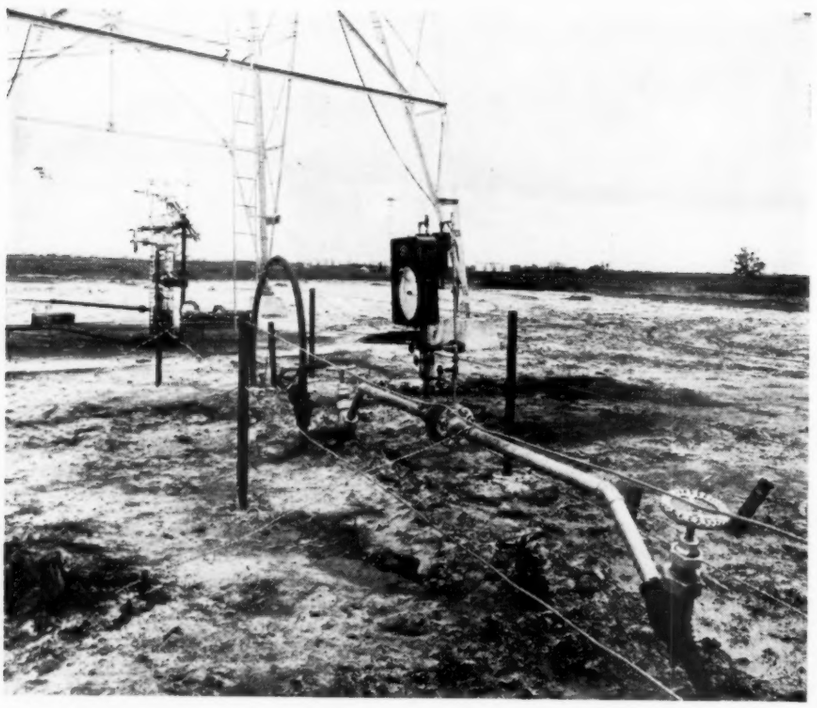




Rear view of the compression plant. Fuel gas and water header systems are shown just back of the plant and the large mufflers of new design at the left of the picture

Gas header system from the low pressure side of the compression plant showing method of fabricating low pressure headers. Scrubbers and intercoolers in the background. At two points the headers are crossed with all steel stairs and walkways so placed as to be convenient for the plant operators to walk from the compression plant to the low and high pressure scrubbing, separating, cooling and regulation equipment in service back of the header system





Details of assembly at injection well with gas induction at high pressure at Humble Oil & Refining Company's Raccoon Bend, Austin County, Texas, pressure maintenance project

first trap or separator, as previously mentioned. From this point it is blown to oil or gasoline storage.

This trap is used also for collecting the escape or popped vapors lost from the storage tanks, thereby eliminating waste which would be rather large during summer or hot months. Gasoline and oil tankage consists of four 7 x 30 feet horizontal tanks. The production of gasoline is incidental to the operation of the pressure maintenance compression plant, and is, strictly speaking, a by-product of the operations. Absorbers are being added to the plant at this time, and such gasoline as is not extracted under ordinary compression methods will be recovered by the absorbers before the compressed gas is injected into the producing formation.

Low Pressure System

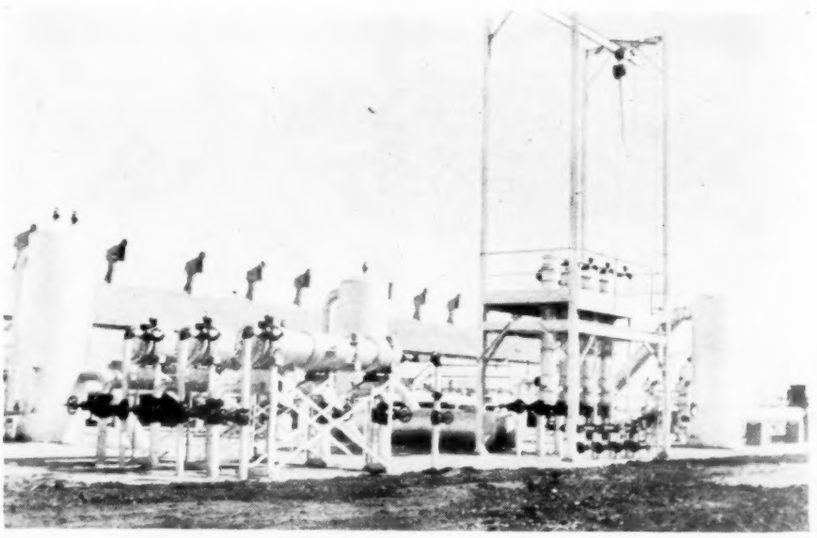
Passing from the second trap the gas is conducted through a 20-inch line to enter the 20-inch intake header at a point located at the center of the header, this insuring equal distribution of the gas throughout the length of the header line. From this header 10 of the machines take suction.

Number 1 machine is a 100 horsepower machine equipped with a double acting 17-inch cylinder capable of handling approximately 960,000 cubic feet daily (two pounds pressure base) from 0 pounds intake to 35 pounds discharge. This gas will be passed through absorbers and used for engine fuel and absorption plant fuel. The excess from this machine will be absorbed by machines number two to 10. These are direct acting machines, five of which are 100 horsepower machines equipped with 17 x 10 x 20 tandem cylinders which are capable of boosting gas to 150 pounds through two stages, 35 pounds and 150 pounds; the other four are 200 horsepower twins equipped with 17 x 20 double acting cylinders to handle gas from 0 pounds intake to 35 pounds discharge and 10 x 20 double acting cylinders capable of handling the 35 pounds gas to 150 pounds discharge. Provision is made for removal of a portion of this 35-pound gas to the fuel gas header in the event No. 1 machine becomes temporarily inoperable for any reason. Each of the cylinders is provided with either 35 or 150 pounds pop or relief valve.

Primary Cooling

From 35 pounds pressure header the hot gas is conveyed through a 14-inch line through a series of traps and exchangers or intercoolers. The first trap is 2½ x 8 feet in dimensions, and is provided with a two-inch gasoline or oil drain line near its base, and is equipped with two three-inch 35 pounds relief valves. Lubricating oil or gasoline accumulating in this trap is blown to storage. Leaving the trap through a 14-inch line the gas passes through three intercoolers which are working in parallel and so manifolded that any one unit can be removed from service for repairs or inspection without interrupting the operation of the plant. The gas inlet temperature is 205°F. (discharge temperature at machines), and in passing through the three intercoolers this temperature is reduced to 62°F. These and other temperatures reported are based on operations on the day of the writer's visit at the plant and are not necessarily constant temperatures as some slight differences will be shown under varying climatic conditions.

After passing through the exchangers the cold gas enters



System of intercoolers or exchangers cooling gas from the compression plant. A third battery of intercoolers cools gas at the higher pressures, those shown being employed for cooling at 35 pounds and 150 pounds pressure

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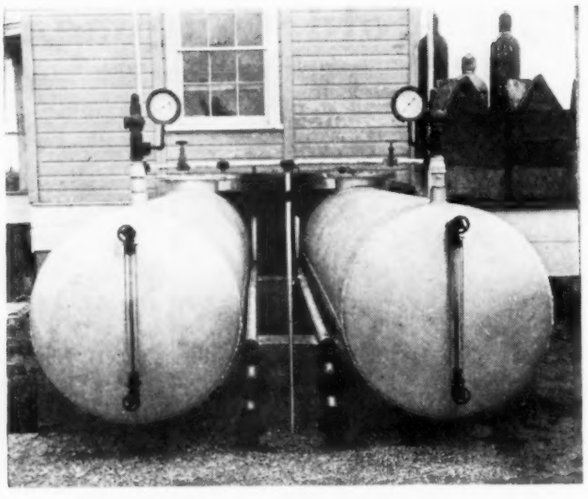

Two grades of lubricating oil are held in storage in these containers and piped to the machines in the compression plant through two overhead oil lines

a second scrubber or trap, size 5 x 15 feet, which is also provided with two 35-pound, three-inch relief or pop valves. The 35-pound gas to be used as fuel is to be taken from this trap to the 35-pound absorber being installed, and from there will pass on to the fuel lines. Any gasoline condensed in the cooling system is accumulated in the bottom of this trap and conveyed through a two-inch line to gasoline storage.

A 14-inch line conveys the gas after this second separation into another 20-inch 35-pound header line which is the suction header for the 10-inch cylinders on compressors Number 2 to Number 10. These machines take suction through six-inch lines from the header to the compressors, and compress the gas from 35 pounds to 150 pounds, returning it then through four-inch discharge lines to a 16-inch 150-pound header.

From this header the gas passes through a series of traps or separators and four intercoolers comprising the 150 pounds gas pressure cooling system. The flow is through a 12-inch line to the first trap, 2½ x 8 feet in dimensions, from which any liquid is taken from the bottom to nearby accumulators. The gas then passes through a 12-inch line to four intercoolers installed in vertical position. In this vertical installation of exchangers any gasoline which may be condensed in the exchangers as the gas flows downward through them is dropped to the bottom. Gas inlet temperature at the exchangers, which operate in parallel flow, is 220°F. and it is cooled here to 66°F. From this point the flow is through a 12-inch line to a trap, 5 x 15 feet in dimensions. A by-pass arrangement is being installed on this trap so that the 150-pound gas can be taken to the 150-pound absorber and returned just ahead of the regulator. In case of absorption plant shut-down the by-pass can be opened and the plant be operated as a straight compression plant during the down time on the absorption plant.

The two traps are each provided with three-inch 150-pound relief valves. Gasoline accumulating in the bottom of the traps is conveyed through a two-inch system of lines into one of two, 3 x 16 feet, 250-pound working pressure accumulator tanks from which it is blown to storage. It is interesting to note that all of the exchangers or intercooler units are provided each with a whistle which will sound an alarm in the event of any gas leaks.

From the last trap in the 150-pound cooling and scrubbing system the gas passes through a 12-inch line enroute to the 16-inch 150-pound header. Back pressure regulators are installed on this line between scrubber and header, preventing gasoline from passing from the scrubber into the 500 or 1000-pound compressor cylinders in the event any of the 150-pound machines stop operating and the subsequent reduced pressure in the exchanger would permit the gasoline in them to boil. This arrangement eliminates the possibility of explosions traceable to the cause mentioned.

High Pressure System

The second 150-pound header is suction header for six 6 x 20-inch cylinders connected to six 100 horsepower engines which raise pressure from 150 pounds to 1000 pounds per square inch, and one 6 x 20-inch cylinder connected to 100 horsepower engine operating at 500 pounds. The cylinders have four-inch suction lines and discharge to headers through two-inch lines.

The machine operating at 500 pounds discharges to a separate four-inch header line and from this point the 500-pound gas is taken through intercoolers and scrubbers before going to the induction well in the field. A four-inch line conducts the gas to two high pressure type intercoolers, operating in parallel, at 240°F. It is cooled in the exchangers to 67°F. then passing through four-inch line to a high pressure separator or trap 2½ x 10 feet in dimensions. Near the base of this separator there are two accumulator tanks, size 3 x 8 feet into which gasoline accumulating in the base of the separator is transferred through two-inch lines. This gasoline is blown to gasoline storage. In this system, both the compressor and separator are provided with relief valves. As soon as the absorption plant is completed the gas will be carried direct from the machine to the by-pass, which will eliminate the heat exchangers, trap and accumulator tanks. Natural gas at 500 pounds pressure leaving the separator passes into a short four-inch header line from which two-inch lines lead to the points of induction or key wells in the field.

The other six-cylinder compressors taking suction on the 150-pound and boosting the gas to 1000 pounds pressure, discharge through two-inch lines, provided with expansion loops outside of the engine room, and into a four-inch 1000-pound header line. This gas at 280°F. is passed through two high pressure exchangers working in parallel and cooled to 99°F., using four-inch piping to conduct the cooled gas into the trap or separator. This trap is 2½ x 10 feet in dimensions. Both trap and compressor are provided with 1000-pound relief valves. Gasoline condensed in this operation is withdrawn from the bottom of the separator into one of two 10 x 20-feet accumulators and removed to storage, using two-inch piping in the gasoline handling system.

By means of a system of regulators a portion of the gas in the 1000-pound separator is removed to the field for injection into key wells and the remainder is passed into another high pressure four-inch header line and back to another compressor. This regulation insures that intake pressure of the last compressor will not rise above 905 pounds, or that control of the gas flow to the wells will be around 910 pounds. In other words, through this regulation when the gas in the last separator mentioned reaches a pressure of 910 pounds its flow is diverted to the field. This assures that the last compressor will secure all the gas needed, but not too much.

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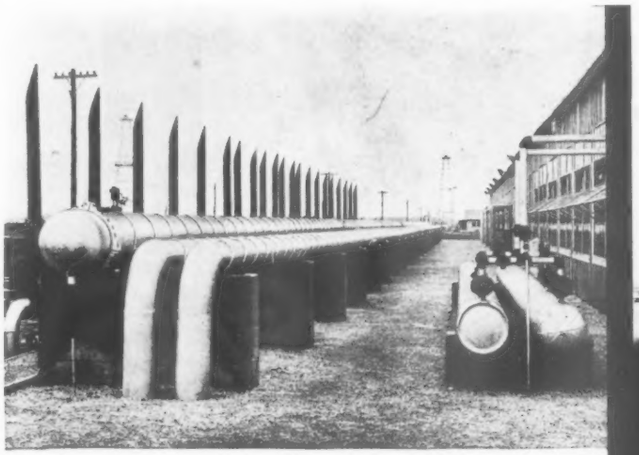
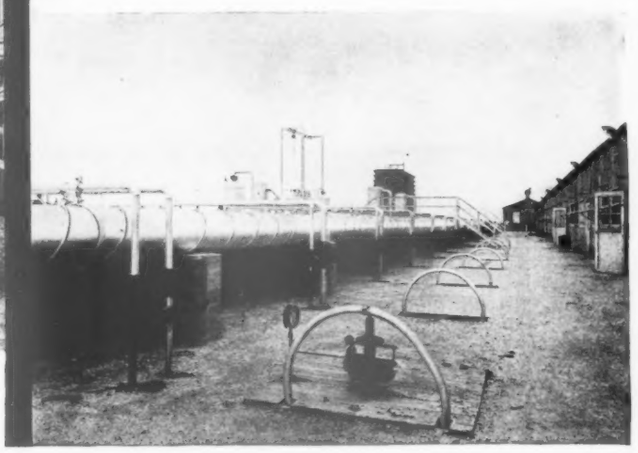


Fuel and circulating water manifolds of Naylor Pipe in the world's largest gas repressuring plant.

Naylor Pipe in the distribution manifold of the world's largest gas repressuring plant.



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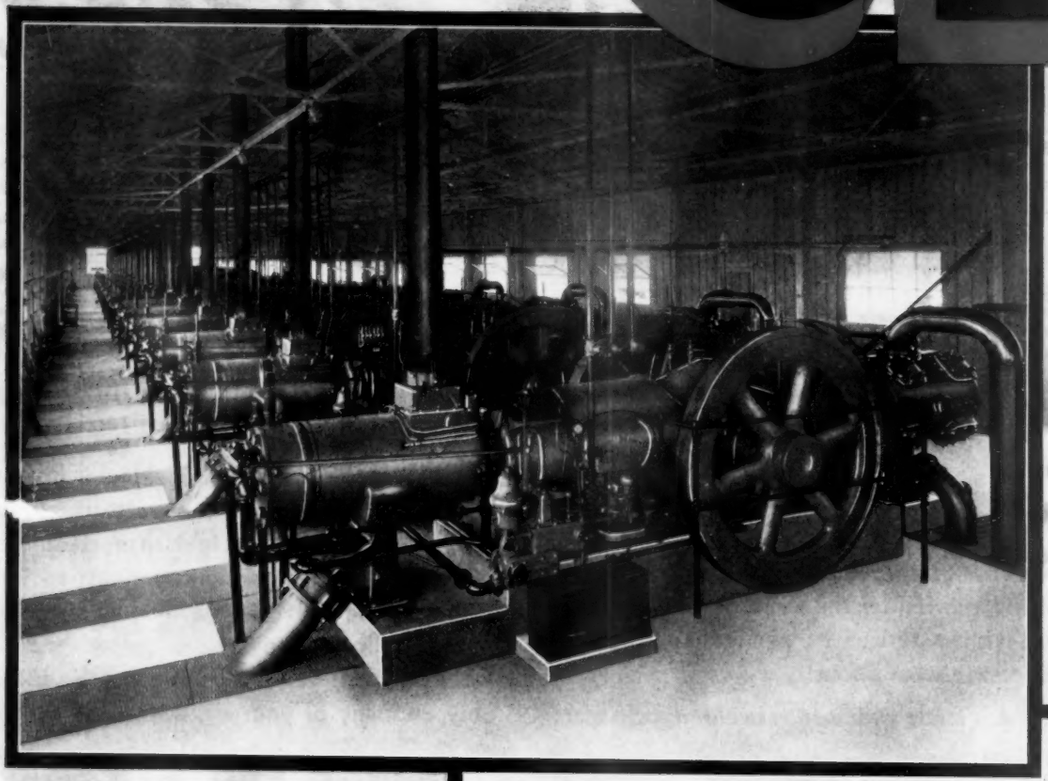

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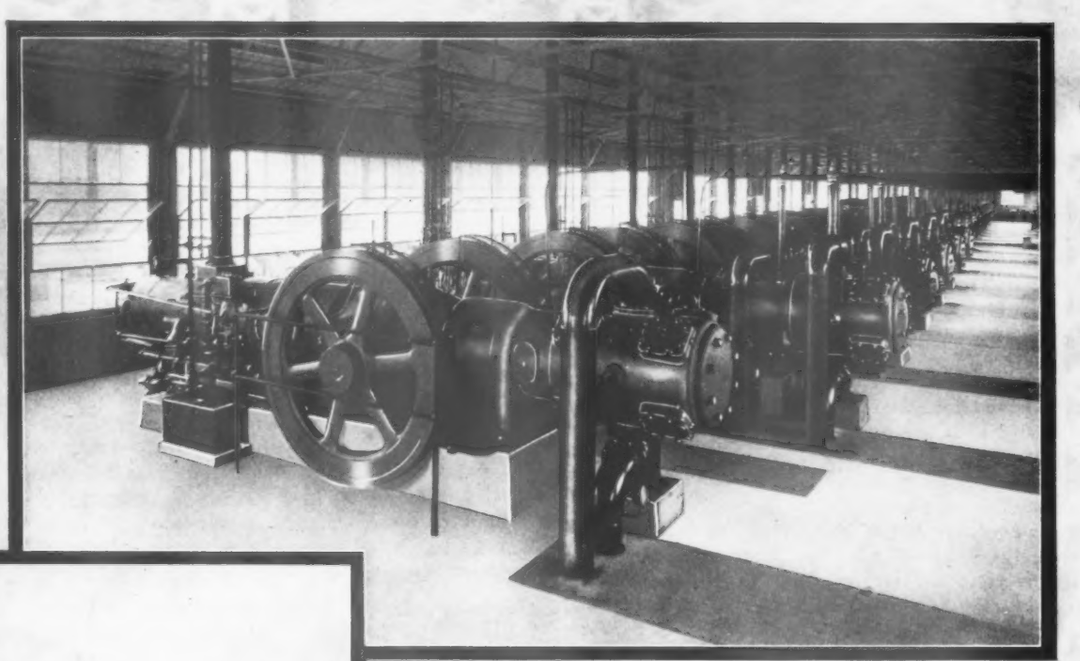

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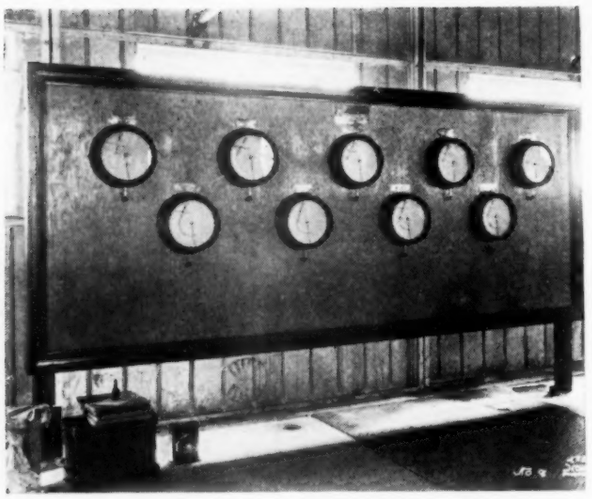

Recording instruments placed on a centralized control board in the compression plant record the various pressures at which all steps in the system are operating

header at 905 pounds through a two-inch suction line, discharges that gas at 1250 pounds through a discharge line of same diameter and into a separate four-inch header. A special 2000-pound cylinder, 4 x 20-inches connected to a 100 horsepower engine, is used in this compression. Gas at 1250 pounds is taken directly from this header to the key well in the field receiving the higher pressure gas.

Header System

The system of nine headers required to handle the gas through its several compressions, cleaning and cooling, is located adjacent to the compressor building and running parallel to it with an over-all length of about 255 feet. A similar system of headers is used on the opposite side of the building for the handling of cooling water to the 18 machines and fuel gas, these being 10-inch water headers and a 20-inch fuel gas header. Those headers handling the gas in the steps discussed in the foregoing consist of three 20-inch low pressure headers, two 16-inch headers, operating at 150 pounds and four four-inch headers operating at 500, 1000 and 1250 pounds per square inch. All of the low pressure headers are of spiral weld pipe, with the hot gas headers welded and the cool gas headers are coupled with a binder type pipe coupling.

Concrete piers three feet in height and one foot in thickness are employed to support the low and high pressure gas manifolds (also the fuel gas and water manifolds on the other side of the compression plant). These piers are placed at intervals of 10 to 16 feet depending upon the load to be carried. They range in length from nine feet, 11 feet, to 15 feet—the length, naturally depending upon the number of headers to be carried. All three 20-inch headers and one of the 16-inch headers run the full length of the plant, while one 16-inch header is about 140 feet in length, and the four four-inch high pressure headers are but 100 feet in length. At two points between the ends of the plant the headers are crossed with all steel steps and walkways which are so placed as to be convenient means for the plant operators to walk from the compressor building to the low and high pressure scrubbing, separating, cooling and regulation equipment, which is in service back of the gas headers.

All valves and fittings requiring inspection or manipulation are installed so as to be easily accessible to the operators. Thermometers indicating temperatures on various intercoolers and separators are also placed for convenient reading. In many instances, manifolds, by-pass lines, valves, and the like are elevated to a height of about three feet above ground, and this lends to the ease of inspection of such equipment as well as making it more convenient in operation. With all outside equipment painted with aluminum and with the symmetry of lay-out secured through careful planning, and building entirely by blue print, a striking appearance has been secured, which is added to by the cleanliness of the well kept yard. Safety measures and appliances have been freely employed in the erection and in the operation of this plant.

Interior of Compressor Station

A structural steel metal covered building 254 feet long houses the 18 compression machines comprising this plant. The building is now being extended for the installation of one 200 horsepower twin engine equipped with 7¼-inch cylinders for boosting gas from 150 to 300 pounds. The building is well lighted and ventilated by means of 60 large metal frame windows, and with wide sliding doors at each end and two back and six front swinging doors. Ample illumination for night work is provided through the installation of 60 vapor proof globes arranged in three lines down the center and both sides and above the compressers. Seventeen large ventilators are provided at the peak of the roof providing ample outlet for fumes and vapors and bad air. The interior of the plant is kept spotlessly clean and freshly painted.

The compression equipment consists of 18 gas engine driven compressors. Unit Number 1, is a 100 horsepower unit with a 17-inch double acting cylinder used in the compression of fuel gas. Units Number 2 to 6 are Tandem single acting, 100 horsepower units with 17- and 10 x 20-inch cylinders. Units 7 to 10 are 200 horsepower twin machines equipped also with 10 x 20-inch and 17 x 20-inch double acting cylinders. These units, 2 to 10 are employed in compressing gas to 150 pounds. Units 11 to 16 are 100 horsepower double acting type V. S. provided with 6 x 20-inch cylinders. They are employed to compress gas from 150 to 1000 pounds. The seventeenth unit is also 100 horsepower, double acting, having a 6 x 20-inch type S cylinder, and is employed to boost pressure from 150 to 500 pounds as previously described. The last unit, Number 18, is also 100 horsepower, but it is equipped with a special high pressure, single acting, 4 x 20-inch cylinder designed for pressures as high as 2000 pounds per square inch.

Safety guards are provided around each fly-wheel on all of the machines. These consist of both the customary welded guard railing, and in addition a heavy wide mesh wire guard. All of the machines are equipped with an automatic lubricating oil filter and purifier.

Control

Located at the side of the compressor room and at the center of its length there is a large control board serving as a guide to the operators of pressure conditions at various points about the plant. On this control board are mounted nine large gages, each provided with a brass plate on which is stamped the pressure indicated and its source. These read as follows—Field Suction -0- pound gage; Low Field discharge Header, 35-pound gage; Intermediate Intake Header—35-pound gage; Intermediate discharge header—35-pound gage; High stage suction — 150-pound gage; Intermediate High Stage discharge—500-pound gage; High field discharge, 1000-pound gage; third state suction header 1000-pound gage, and third stage discharge header 1200-pound gage. With this concentration of gages indicating pressures at the essential or important steps in the compression system located as they are, the hourly readings recorded by the operators are easily taken. Temperatures at the various steps are taken from the discharge side of the compressors and from thermometers placed at the vari-

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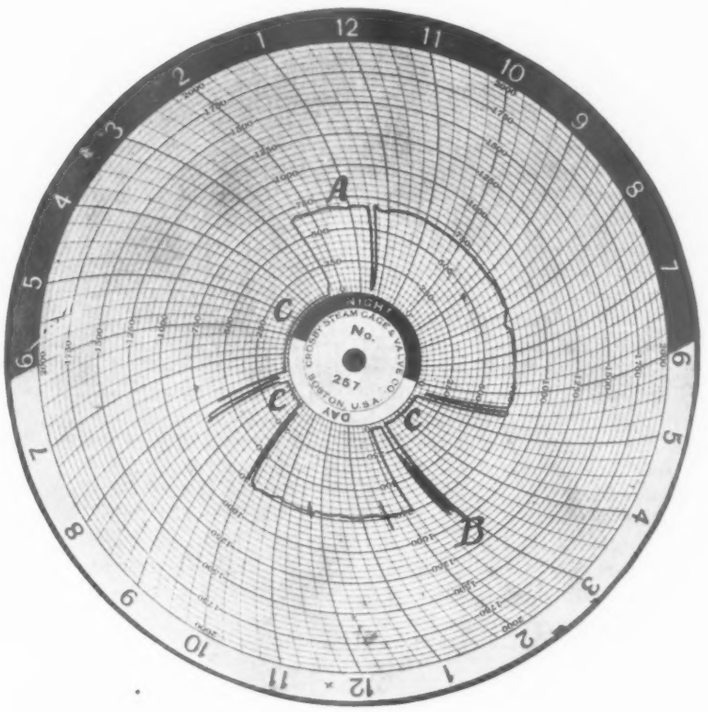

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HERE ARE 3 good and valuable reasons from an actual chart taken from a well December 9th, 1930, in the Oklahoma City Field.

1. NOTE AT (A)—The fall in pressure from 6 P. M. until 12:15 A. M. This shows the gradual cutting out of two tool joints. (These were found on pulling out.) SAVED BAD FISHING JOB.
2. NOTE AT (B)—The pressure rise 750 pounds to 1000 pounds from 2:42 P. M. to 3 P. M., cuttings settling to the bottom required 1000 pounds to break circulation. This might have been a frozen string of drill pipe.
3. NOTE AT (C)—Circulating and shut down times. Here is the method of actually checking the life of the Pumps and pump parts. ACCURATELY—The length of time in operation. The operating pressure—A REAL CHECK.

THERE ARE OTHER GOOD REASONS

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WEIGHT RECORDING MEASUREMENT AND CONTROL

ous intercooler units on the plant yard. A small table is provided near the control board for the convenience of the operator in making his records of plant operation. Meters for the measurement of incoming gas from the field, fuel gas for the engines and for the measurement of out-going gas at 500, 1000 and 1250 pounds, are placed as near the plant as is convenient. Twenty-four-hour charts are used, making permanent record of the volume of gas taken into the plant and its distribution to the field as fuel, fuel for the plant, and gas injection through the key or induction wells for pressure maintenance purposes. The convenient location of meters, thermometers, and control board lends much to the efficiency of plant operation and makes it possible for the operator to spend most of his time near his compressors where he can more closely check their operation.

Above the machines and down the length of the building there are three lines to convey compressed air and lubricating oil to the machines. The air line, which is three inches, carried compressed air from two large air bottles located at one corner of the building. These are 31 feet six inches x 16 inches, and made of spiral welded pipe. The air pressure maintained in these bottles is derived from the operation of two small compressors located in the nearby pump house. One of these compressor installations is belt driven by a 10 horsepower gas engine, and the other machine is belt driven by a 15 horsepower electric motor. Two-inch lines extend from the overhead air line to each machine, each of which is provided with two valves, one being globe type and the other stop-cock type, which assures that no air will leak to the engines while they are in operation.

Lubricating oil of two grades, one heavy for the crank case, and one light oil for the automatic lubricators, is conveyed to each machine by means of two two-inch overhead lines, as mentioned above, from which drop lines of one-inch diameter extend down to a point just above the engines. The lubricating oil is then fed into the crank cases or the lubricators by means of short lengths of flexible metal hose. Both the hose and down-pipe are provided with valves and bibs.

Lubricating oil is stored in two tanks placed near the roadway and convenient for unloading oil requirements hauled to the plant by truck. Each tank is equipped with glass gage to indicate oil level, an indicating pressure gage showing pressure on the tanks, and a pop valve set at about 35 pounds to release pressure in event of emergency. Pressure required for moving the oil from these tanks to the two-inch overhead lines extending above the engines, is secured from the 35 pounds fuel gas header, with gas conveyed to the lubricating oil tanks through a three-quarter-inch line. Manifolds and valves at the tanks are arranged for release of pressure, removing the tanks from service while they are being filled. In the distribution of all of the lubricating oil requirements for the operation of the 18 machines in the compression plant by means of this centralized storage and distributing system much time is saved and further, because of the simplicity of such an oiling system and the convenience of apparatus the method employed effects a reduction in labor.

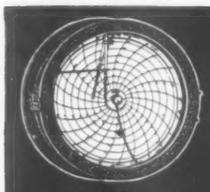
Operating personnel at the compression plant at the Raccoon Bend pressure maintenance project. Left to right: A. D. Murphree, foreman; W. J. Jackson, petroleum engineer; W. B. Burgess, operator; Leroy Jones, oiler; J. I. Brosell, repair man; E. E. Moyer, assistant repair man; R. A. Watson, oiler; Stanley McCune, assistant repair man; C. A. De Queant, repairman

Distribution of Water

Water for cooling purposes is brought into the plant from the field through a four-inch line to a steel water storage tank, size 25 by 30 feet, from which it is distributed by gravity flow or by pumping through the intercoolers and over the engine water jackets. The water system has been designed for convenience and simplicity of operation. The various lines used for the circulation or transfer of water from tankage to compressors, through the pump house, through the system of 11 intercoolers, and to and from the cooling tower and hot well are so arranged and so manifolded that the circulation of flow may be changed to suit various operating conditions almost instantly. Water from the storage tank may overflow into the hot well (16 x 16 feet) through a six-inch line, or it may overflow directly to the engines through a 10-inch line, into a 10-inch water header and over the engines through two-inch intake lines, passing back into the second 10-inch header through three-inch discharge lines.

Water for gas cooling purposes is circulated through an eight-inch header line paralleling the four installations of intercoolers, flowing back through a 10-inch header. Water is pumped over the cooling tower through an eight-inch line and the suction line from cooling tower to pumps is also eight-inch.

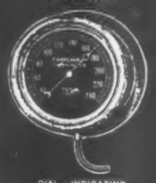
Three motor driven pumps, two centrifugal and one rotary are installed for water circulation. These pumps and transfer lines are manifolded in such a manner that the water circulation system is very flexible. One of the pumps, designated as No. 2 is manifolded so that it may act as an auxiliary unit for either pump No. 1 or No. 3. Pump No. 3, operating under one system of circulation, takes suction out of the cooling tower pit and discharges through the line carrying water through the heat exchanger system and into the 25,000-barrel water storage tank. From this point, under this system, the water flows by gravity from the large water tank through the engine jackets and into the hot well, from which point it is pumped over the cooling tower by pump No. 1 as previously mentioned. Under another system, designated as forced feed system, Pump No. 3 takes suction from the cooling tower pit, forces the cool water through the heat exchanger system where it cools the gas, and then on through the engine jackets where it keeps the engine running cool, and then back over the cooling tower, making the complete cooling cycle in one pumping. Through this arrangement the water circulation system may be changed to suit various conditions of operation through the use of the auxiliary pump, manifolded to do the work of either of the other pumps the service is not interrupted in the event of needed repairs to either pump.



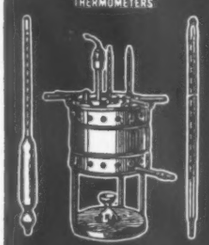
RECORDING THERMOMETERS AND PRESSURE GAGES

RECORDER - CONTROLLERS

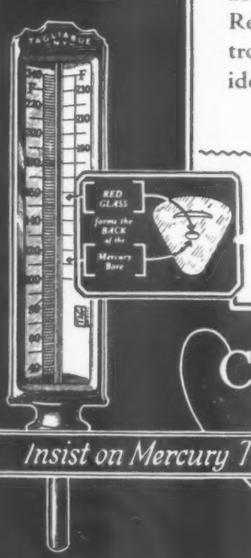
AUTOMATIC CONTROLLERS

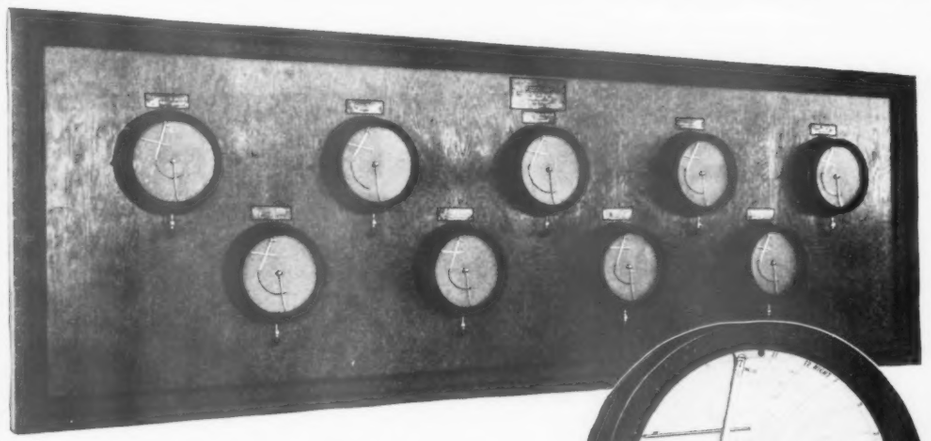


DIAL - INDICATING THERMOMETERS



OIL TESTING INSTRUMENTS, THERMOMETERS, HYDROMETERS, ETC





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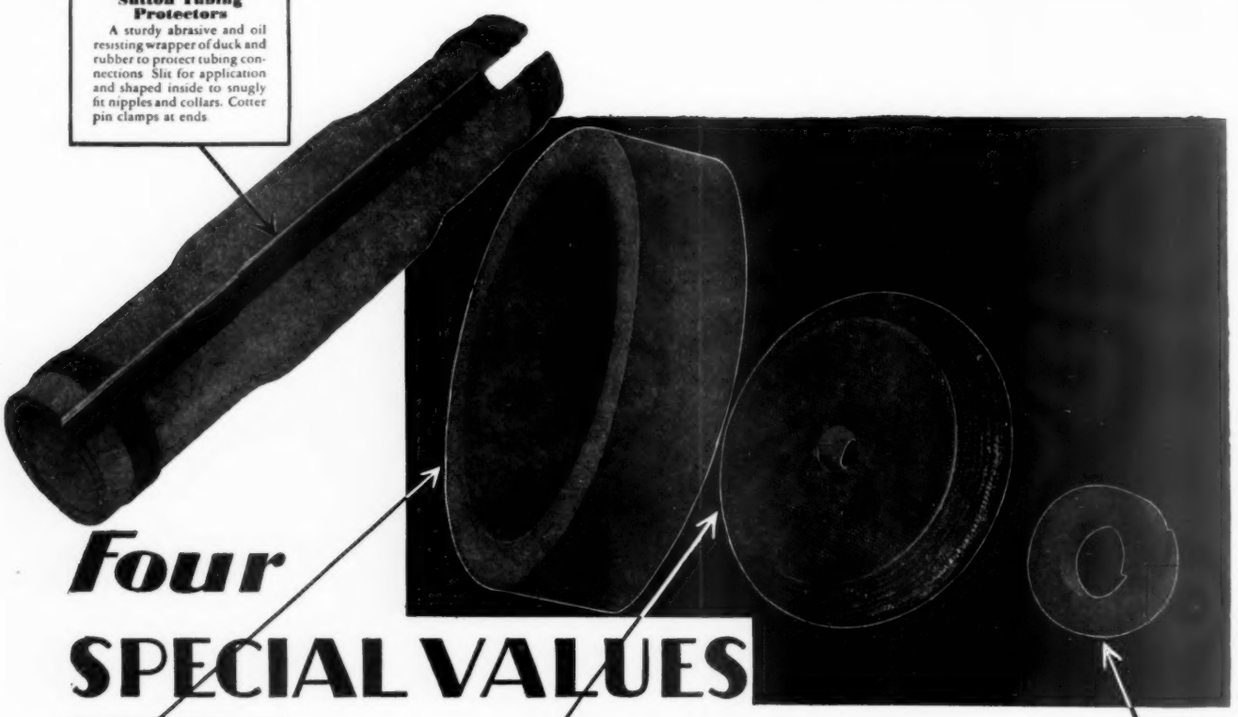

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Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Producing and Refining Situation in Balance

FOR the first time since proration and curtailment of crude production and refining has been generally adopted by the industry, in fact, for the first time in a number of years, the petroleum industry has reached a state of absolute balance between supply and demand. This conclusion is based upon a number of facts cited below which point definitely to a brighter outlook for the industry as a whole than has been apparent for more than two years.

A further decline in daily average crude oil production of 44,650 barrels last week brought the output down to but 2,082,100 barrels a day. At this point it is well to begin looking ahead in an attempt to anticipate the probable demand for crude during the present year. A preliminary check of probable gasoline demand indicates a domestic demand of about 416 million barrels and a probable foreign demand of 71 million barrels; a grand total of 487 million barrels. Allowing for a fixed limit of 13 million barrels of gasoline imports and the need for 55 million barrels of natural gasoline for blending purposes, it is apparent that the net quantity of gasoline required from refineries this year will aggregate nearly 420 million barrels.

On the assumption that the average yield of gasoline from crude (straight run and cracked) will approximate 43½ per cent this year, it is seen that the refineries will need about 965 million barrels of crude, of which perhaps 55 million barrels will constitute imported crude. This spells a demand for American crude of about 910 million barrels, to which must be added about 31 million barrels that will probably constitute exports and used as fuel in the fields. This indicates a total demand for 1931 of 941 million barrels of American crude, a daily average of 2,577,000 barrels.

Easing of Curtailment in Sight

With the foregoing figures before the industry it is logical to conclude that producers will not find it necessary to maintain production at the present level for any length of time. In fact, it is believed that the present level is at or near the bottom of the downward trend of production and the near future will in all probability witness a gradual upward trend. As matters stand now, crude production is actually far below current requirements and it is believed that present refinery runs schedules reflect the maximum limit of curtailment necessary to assure the prevention of piling up gasoline stocks in excess of 40 million barrels by April 1. In fact, a reduction in still runs of 121,000 barrels was reported to the American Petroleum Institute last week, indicating that all refineries of the United States are running on an average of 2,152,000 barrels of crude a day. This means that the refineries are now using about 2,000,000 barrels of domestic crude daily and other consumption of domestic crude amounts to about 80,000 barrels a day, or a total requirement for American crude of about 2,080,000 barrels daily. Actually, the industry produced 2,082,000 barrels of crude a day during the week ending January 3. This undoubtedly indicates a balanced situation.

California Lower

California extended curtailment activities last week by further restricting crude output to the extent of 28,300 barrels a day, bringing the state total down to within 37,500 barrels of the recently adopted limit of 500,000 barrels. This marks a decisive stroke for the industry in California and has undoubtedly created a stronger tone in the crude market there.

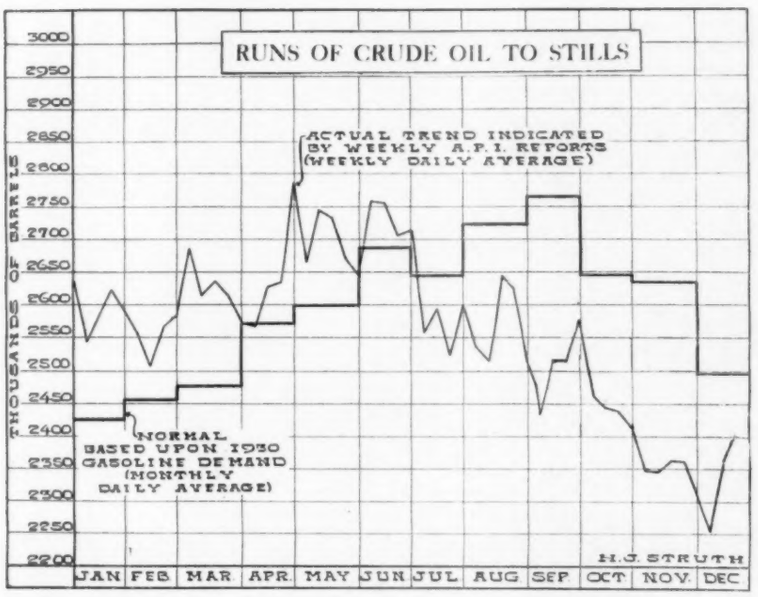
Oklahoma has been placed on a curtailment basis of 465,000 barrels daily for the first quarter of this year and last week's actual production was 16,100 barrels below that figure. Conditions in Oklahoma continue to reflect the withdrawal of Prairie Oil & Gas Company from the crude market and many small producers face the prospect of having their wells shut in entirely, unless speedy means of alleviating their difficulties are found.

Texas operators also extended their curtailment activities during the past week by a further reduction in output of 13,300 barrels daily. On the basis of an allowable output of 680,000 barrels, Texas production is now 27,538 barrels a day below that figure. On the whole, the industry now shows a deficit between allowable and actual production of nearly 16,000 barrels a day, although it is seen from the figures cited in the foregoing that the industry has actually reached a state of absolute equilibrium.

Following are the more important changes in production reported by the American Petroleum Institute for the week ending January 3:

		Barrels
Gray County	Decrease	2,900
Archer County	Decrease	1,000
North Young County	Increase	1,000
Crane-Upton Counties	Decrease	1,700
Howard County	Decrease	1,750
Darst Creek	Decrease	5,900
Salt Flat	Increase	1,100
Barbers Hill	Decrease	1,100
Bowlegs	Decrease	1,300
Carr City	Increase	2,150
Earlsboro	Decrease	1,450
East Earlsboro	Decrease	1,850
Konowa	Increase	1,400
Mission	Decrease	2,250
St. Louis	Decrease	1,500
Seminole	Decrease	1,150
South Earlsboro	Decrease	1,000
Elwood	Decrease	2,000
Huntington Beach	Decrease	2,700
Long Beach	Decrease	4,300
Midway-Sunset	Decrease	1,000
Playa del Rey	Decrease	6,400
Santa Fe Springs	Decrease	3,300
Seal Beach	Decrease	2,300
East Hackberry	Increase	1,500
Vinton	Increase	1,100

MARKET SECTION



Gasoline Stocks Up Despite Lower Runs

According to the American Petroleum Institute, stocks of gasoline on hand January 3 aggregated 39,780,000 barrels, compared with 39,380,000 barrels on hand December 27, a gain of 400,000 barrels. This was somewhat unexpected, in view of the fact that still runs of crude had been reduced during the past week to the extent of 121,000 barrels a day. It is believed, however, that the present rate of refinery throughput will effectively hold gasoline stocks at or below their present level, assuring the attainment of the prescribed limit of 40,000,000 barrels set for April 1. In fact, it is believed that the present rate of refinery throughput will bring about a further reduction in gasoline stocks during the next few weeks and place the refining branch of the industry in a position to maintain a better balance between supply and demand during the present period of low demand.

Runs of crude through refinery stills during the week ending January 3 aggregated 14,667,000 barrels, a daily average of 2,095,000 barrels. On a Bureau of Mines basis, this indicates a total daily throughput by United States refineries of 2,152,000 barrels, and represents a decline in runs of 634,000 barrels a day from the peak last April.

CRUDE RUNS TO STILLS, GASOLINE STOCKS AND GAS AND FUEL OIL STOCKS, WEEK ENDING DECEMBER 27, 1930

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting Total	Potential Capacity Reporting Per Cent	Crude Runs to Stills Total	Crude Runs to Stills Daily Average	Crude Runs to Stills Per Cent Operated	Gasoline Stocks	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,206,000	458,000	74.8	5,780,000	9,957,000
Appalachian	141,300	132,500	93.8	543,000	77,600	58.6	1,005,000	1,044,000
Ind., Ill., Ky.	390,800	381,000	97.5	1,697,000	242,400	63.6	4,489,000	3,547,000
Oklahoma, Kans., Mo.	461,100	412,200	89.4	1,594,000	227,700	55.2	2,808,000	4,293,000
Texas	809,000	743,500	91.9	3,393,000	484,700	65.2	6,813,000	10,760,000
Louisiana-Arkansas	266,600	262,000	98.3	1,014,000	144,900	55.3	1,514,000	2,303,000
Rocky Mountain	150,100	139,700	93.1	275,000	39,300	28.1	1,642,000	996,000
California	898,500	887,600	98.8	3,730,000	532,800	60.0	15,337,000	104,017,000
Total Week Dec. 27	3,730,100	3,571,200	95.7	15,452,000	2,207,400	61.8	39,388,000	136,917,000
Total Week Dec. 20	3,730,100	3,571,200	95.7	16,332,000	2,333,100	65.3	†38,621,000	137,017,000

The total U. S. figures for last year, shown immediately below, are not comparable with this week's totals because of difference in percentage capacity reporting.

Total Dec. 28 1929	3,678,700	3,514,200	95.5	17,789,000	2,541,300	72.3	41,960,000	*142,871,000

The Texas and Louisiana Gulf Coastal Figures Shown Below are Included above in the Totals of Their Respective Districts.

Texas Gulf Coast	529,500	529,500	100.0	2,567,000	366,700	69.3	5,379,000	8,064,000
Louisiana Gulf Coast	147,500	147,500	100.0	695,000	99,300	67.3	1,253,000	1,356,000

*Final Revised. †Gasoline stocks total revised to 38,621,000 barrels due to an error in report of a California company. Revised total for California for week ending December 20 is 15,320,000 barrels.

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

	Quota Limit First Quarter 1930	Actual Daily Average Week Ending Jan. 3, 1931	Excess
Arkansas	59,518	49,750	—9,768
California	500,000	537,500	37,500
Kansas	105,554	108,300	2,746
Louisiana	57,704	69,600	11,896
Oklahoma	465,000	448,900	—16,100
Texas	680,238	652,700	—27,538
Balance of U. S.	230,000	215,350	—14,650
Total	2,098,014	2,082,100	—15,914

Threat of Lower Price Forces California Reduction

Efforts to force production down have been the natural result of a desire to make a satisfactory adjustment in California before a lower consumption demands a lower price schedule for both crude and refined products. It has become increasingly evident that a state output of 600,000 barrels daily or more will not allow a reduction in stocks.

Economic conditions in other parts of the United States and the whole world have affected the normal increase in demands for California petroleum products. The lower price schedules along the Eastern seaboard and throughout the Middle West have slightly isolated California so far as the shipments of certain commodities are concerned. Despite this supposed differential, cargo shipments have been sent through the Panama Canal with fair success. The demand for refinable crude has improved slightly with a lower production, but spot shipments within the Los Angeles Basin are still a disturbing factor. The heavy oil market is fractionally stronger following a period of extreme weakness.

A wide differential in the service station prices of gasoline has reduced the gallonage of major operators who are holding to the higher posted prices in the Los Angeles territory. Gasoline is being retailed at 12½ cents at many stations, as against a regular posted price of 20½ cents. A general reduction is anticipated unless a more equitable average figure is used by cut price dealers. Export gasoline in full cargo shipments has been sold to net back considerably less than the supposed minimum of 6½ cents.

Gasoline stores are still burdensome and refinery runs probably will be lowered during the remainder of the winter to parallel the lower output in crude production. Fuel oil is showing a better tone but the supply from previous periods of excess refinery runs is still plentiful.

Atlantic Buys 4,000,000 Barrels of Refugio and Pettus Crude

Houston.—Atlantic Oil Producing Company, subsidiary of Atlantic Refining Company, Philadelphia, has contracted with Gulf Coast Pipe Line Company (a Moody-Seagraves-Morgan concern) for purchase of over 4,000,000 barrels of Pettus and Refugio crude during 1931, with deliveries to be

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

(Barrels of 42 Gallons)

	Week Ended Dec. 27	Week Ended Dec. 20
AT ATLANTIC COAST PORTS—		
Baltimore	203,000	.....
Boston	193,000	92,000
New York	1,071,000	866,000
Philadelphia	178,000	207,000
Others	138,000	65,000
Total	1,783,000	1,230,000
Daily Average	254,714	175,714
AT GULF COAST PORTS—		
Galveston District	64,000	.....
New Orleans and Baton Rouge	66,000	138,000
Port Arthur & Sabine District	.....	.....
Tampa	.....	.....
Total	130,000	138,000
Daily Average	18,571	19,714
AT ALL UNITED STATES PORTS—		
Total	1,913,000	1,368,000
Daily Average	273,285	195,428
Daily Average Four Weeks Ended	245,714	259,750
Distribution of Total Imports is as follows:		
Crude	1,060,000	869,000
Gasoline	114,000	193,000
Gas Oil	.....	19,000
Fuel Oil	739,000	287,000
Total	1,913,000	1,368,000

CALIFORNIA OIL RECEIPTS AT ATLANTIC AND GULF COAST PORTS

(Barrels of 42 Gallons)

	Week Ended Dec. 27	Week Ended Dec. 20
AT ATLANTIC COAST PORTS—		
Baltimore	.....	"A" 46,000
Boston	37,000	.....
New York	178,000	172,000
Philadelphia	.....	104,000
Others	34,000	"A" 77,000
Total	249,000	399,000
Daily Average	35,571	57,000
AT GULF COAST PORTS—		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC AND GULF COAST PORTS—		
Total	249,000	399,000
Daily Average	35,571	57,000
Daily Average Four Weeks Ended	55,464	61,607
Distribution of Total California Oil Receipts is as follows:		
Gasoline	64,000	"A" 115,000
Kerosene	62,000	"A" 18,000
Gas Oil	.....	"A" 124,000
Fuel Oil	112,000	142,000
Lubricants	11,000	.....
Total	249,000	399,000

"A"—Revised.

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	671,050	111,700	672,650	178,300	37,650	58,500	142,250	73,850	688,850	2,634,800	81,574,650
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December*	460,600	105,600	534,950	189,250	43,050	51,250	111,600	100,300	590,850	2,187,450	67,811,550
December 27	458,100	108,800	500,100	186,050	42,000	50,950	108,800	100,150	565,800	2,126,750	14,887,250
January 3	448,900	108,300	494,300	186,250	41,750	49,750	113,300	102,050	537,500	2,082,100	14,574,700
Increase	.....	.....	.....	200	.....	.....	4,500	1,900	.....	.....	.....
Decrease	9,200	500	11,800	.....	250	1,200	.....	.....	28,300	44,650	312,550

*Preliminary—Subject to Revision.

TEXAS
(Outside Gulf Coast)

PANHANDLE DISTRICT

	Jan. 3	Dec. 27
Carson County	3,850	4,100
Gray County	41,950	44,850
Hutchinson County	7,800	7,900
Wheeler County	300	300
Others	100	100
Total	54,000	57,250

NORTH TEXAS

Archer County	12,000	13,000
Burkburnett	6,400	6,400
Electra	8,700	8,700
Iowa Park-KMA	3,800	3,800
Montague and Cooke Counties	5,900	6,300
Wilbarger	13,400	12,750
North Young County	6,500	5,500
Others	1,600	1,700
Total	58,300	58,150

WEST CENTRAL TEXAS

Brown County	4,200	4,300
Callahan County	2,750	2,800
Coleman County	1,800	1,800
Eastland-Desdemona	4,000	4,100
Jack County	1,600	1,600
Palo Pinto County	400	400
Shackelford County	4,100	4,200
Stephens County	4,350	4,400
Throckmorton County	500	650
South Young County	2,300	2,550
Others	2,000	2,100
Total	28,000	28,900

WEST TEXAS

Crane-Upton Counties	30,150	31,850
Crockett County	1,900	1,800
Ector	6,900	7,250
Howard County	16,000	17,750
Jones County	1,200	1,150
Mitchell-Scurry Counties	2,000	2,050
Pecos County	3,750	3,900
Reagan County	21,550	21,400
Winkler County	54,900	54,650
Yates	91,200	91,100
Others	6,300	6,250
Total	235,850	239,150

EAST CENTRAL TEXAS

Boggy Creek	2,550	2,500
Corsicana Powell	5,050	5,000
Currie	300	300
Joiner District	550	300
Mexia	3,800	3,850
Nigger Creek	200	200
Richland	150	150
Van Zandt	27,550	27,600
Wortham	650	600
Others	50	50
Total	40,850	40,550

SOUTHWEST TEXAS

Chapman-Abbott	5,400	5,350
Dale	250	250
Darst Creek	28,650	34,350
Laredo District	14,500	14,400
Luling	9,800	9,800
Lytton Springs	700	700
Salt Flat	16,200	15,100
Somerset	1,300	1,300
Others	600	650
Total	77,300	82,100
T'tl Tex. (outside Gulf Coast)	494,300	506,100

TEXAS GULF COAST

Barbers Hill	21,500	22,600
Batson	1,000	1,000
Big Creek	3,000	3,100
Blue Ridge	1,600	1,600
Boling	900	900
Diamond Mound	650	650
Esperson	2,600	2,500
Fannett	550	500
Goose Creek	4,300	4,250
Hankamer	2,500	2,100
Hull	7,200	7,300
Humble	11,600	12,050
North Dayton	1,250	1,000
Orange	2,100	2,200
Orchard	1,850	1,900
Pettus	8,300	8,000
Pierce Junction	9,500	10,400
Port Neches	1,650	1,400
Raccoon Bend	8,350	8,400
Refugio	28,950	29,600
Saratoga	1,150	1,150
Somerville	1,150	1,200
Sour Lake	1,900	1,900
South Liberty	2,800	2,700
Spindle Top	13,050	13,200
Sugar Land	12,100	11,200
West Columbia	4,650	4,700
Others	2,250	2,400
Total	158,400	159,900
Texas Total	652,700	666,000

OKLAHOMA

Allen	12,950	12,800
Asher	800	800
Blackwell	2,150	2,200
Bowlegs	12,100	13,400
Braman	1,800	1,800
Bristow Slick	10,500	10,550
Burbank	13,700	13,200
Carr City	12,850	10,700
Cromwell	4,200	4,200
Cushing	11,550	11,950
Davenport	850	900
Duncan District	6,850	6,900
Earlsboro	17,000	18,450
East Earlsboro	15,400	17,250
East Little River	10,250	10,600
East Seminole	2,250	1,850
Fox	850	850
Garber	4,250	4,200
Graham	2,150	2,150
Healdton	9,100	9,100
Hewitt	5,150	5,200
Hubbard	700	700
Konowa	15,500	14,100
Little River	22,100	23,050
Logan County	3,150	3,150
Maud	2,600	2,850
Mission	4,650	6,900
North Okmulgee	7,950	7,950
Oklahoma City	86,550	87,250
Osage (outside Burbank)	22,500	22,500
Papoose	2,100	2,100
Pearson	550	500
St. Louis	20,550	22,050
Sasakwa	4,150	4,200
Scholem Alechem	10,600	10,550
Searight	5,350	5,350
Seminole	12,800	13,950
South Earlsboro	6,600	7,600
South Okmulgee	4,500	4,500
Thomas	400	400
Tonkawa	4,250	4,250
West Asher	7,350	7,300
Wewoka	4,400	4,300
Yale Jennings	5,300	5,450
Others	37,600	38,100
Total	448,900	458,100

CALIFORNIA

Dominguez	9,800	9,800
Elwood-Goleta	27,800	29,800
Huntington Beach	22,000	24,700
Inglewood	15,500	15,000
Kettleman Hills	22,600	22,600
Long Beach	93,300	97,000
Midway-Sunset	56,000	57,000
Playa Del Rey	38,000	44,400
Santa Fe Springs	74,500	77,800
Seal Beach	15,000	17,300
Ventura Avenue	45,000	45,400
Others	118,000	125,000
Total	537,500	565,800

KANSAS

Augusta-Fox Bush	3,150	3,050
Churchill	3,500	3,450
Eldorado-Towanda	13,250	13,200
Florence-Covert	800	800
Greenwood County	16,500	16,150
Oxford	2,500	2,500
Peabody-Ebling	2,400	2,400
Rainbow Bend	1,150	1,100
Russell	3,150	3,100
Sedgwick	20,800	21,450
Voshell	12,100	12,600
Others	29,000	29,000
Total	108,300	108,800

NORTH LOUISIANA

	Jan. 3	Dec. 27
Caddo Heavy	2,700	2,750
Caddo Light	8,150	8,150
Carterville	1,800	1,750
Cotton Valley	1,800	1,850
DeSoto-Red River	2,750	2,750
Haynesville	5,400	5,200
Holly	1,000	1,000
Homer	3,200	3,200
Urania	5,000	5,050
Zwolle	8,400	8,800
Others	1,550	1,500
Total North Louisiana	41,750	42,000

LOUISIANA GULF COAST

Bayou Boullion	100	100
East Hackberry	4,500	3,000
Edgerly	300	350
Evangeline	950	1,800
Hackberry	900	900
Lake Barre	1,700	1,800
Lockport	4,300	4,450
Port Barre	1,900	1,800
Sorrento	50	50
Sulphur Dome	2,600	2,600
Sweetlake	1,150	1,150
Vinton	6,200	5,100
White Castle	1,000	1,000
Others	2,200	2,050
Total Louisiana Gulf Coast	27,850	26,150
Louisiana Total	69,600	68,150

ARKANSAS

Champagnolle	3,700	3,500
El Dorado	3,900	3,900
Lisbon	800	850
Nevada	1,000	1,000
Smackover Heavy	34,150	35,100
Smackover Light	4,250	4,700
Stephens	850	850
Others	1,100	1,050
Total	49,750	50,950

MOUNTAIN STATES
WYOMING

Big Muddy	1,900	2,000
Elk Basin	650	750
Grass Creek	1,950	2,000
La Barge	2,000	1,500
Lance Creek	150	550
Lost Soldier	4,400	4,650
Oregon Basin	2,900	3,200
Rock River	2,050	2,100
Salt Creek	28,100	27,250
Others	4,450	3,150
Total	48,550	47,150

MONTANA

Cat Creek	1,150	1,150
Pondera	1,950	1,350
Sunburst	4,450	4,050
Others	50	50
Total	7,600	6,600

COLORADO

Florence	500	400
Fort Collins	1,150	1,150
Moffats (Craig)	1,000	1,050
Others	1,500	1,500
Total	4,150	4,100

NEW MEXICO

Artesia	650	600
Balance Lea County	7,700	8,400
Hobbs High	31,700	31,450
Hogback	450	450
Rattlesnake	1,100	1,300
Table Mesa	50	100
Eddy	100	200
Totals	41,750	42,300
Total Mountain States	102,050	100,150

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)	103,750	100,000
Michigan	9,550	8,800
Total Eastern States	113,300	108,800

PRODUCTION SUMMARY

East of Rockies	1,442,550	1,452,150
Total U. S.	2,082,100	2,126,750

MARKET SECTION

made by the pipe line company from its tanker loading terminal at Aransas Pass on the Gulf Coast.

The contract calls for delivery of a total of 12,000 barrels of crude daily throughout 1931, effective from January 1, including 5000 barrels per day from Pettus field and 7000 barrels daily from Refugio. This represents a total of 4,380,000 barrels for the whole year.

Gulf Coast Pipe Line Company has a looped oil line from Refugio to Aransas Pass, consisting of six-inch and eight-inch carriers, with total capacity around 32,000 barrels daily, and is handling crude involved in the above contract through that system, making the Refugio runs direct from the field, while the Pettus crude is routed to Refugio through the 38-mile combination four and six-inch line of Humble Pipe Line Company, which has the only pipe line outlet for Pettus production.

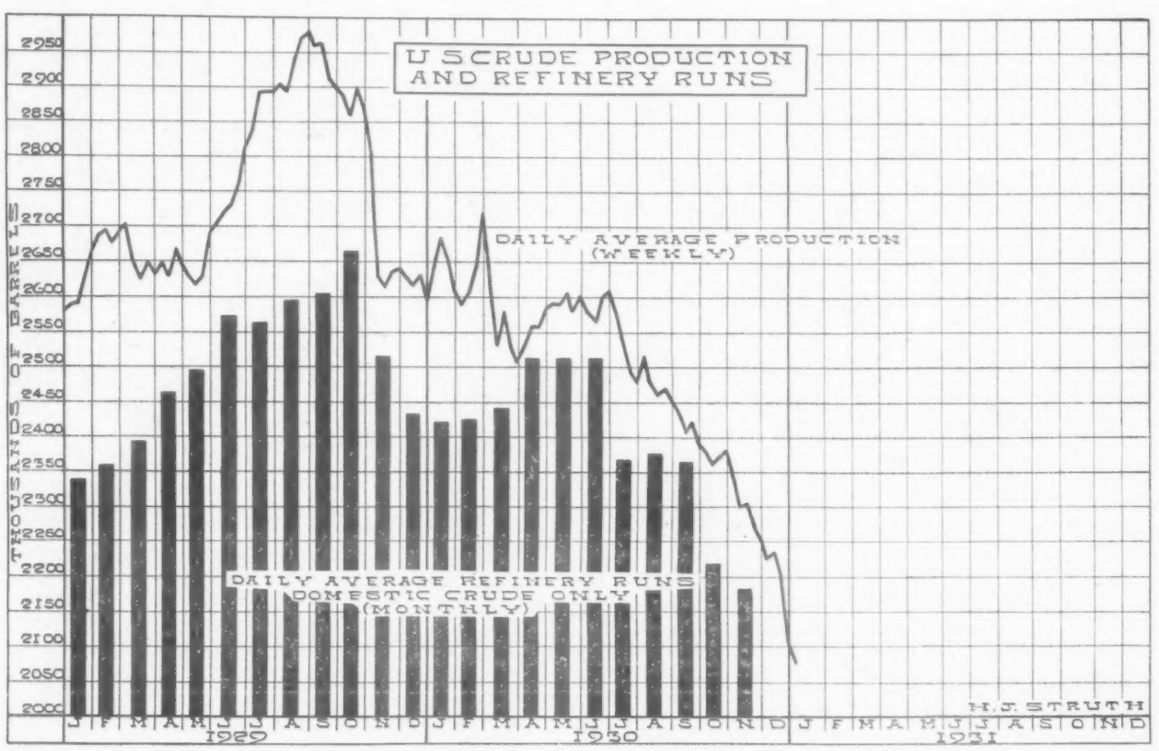
The whole Pettus district under proration is producing around 8300 barrels daily and although they do not have production there now, having disposed of their Union Producing Company holdings, the Moody-Seagraves-Morgan interests have been large crude purchasers in the area since production was established. Aside from their oil, Humble Pipe Line Company is also handling the production and crude purchases of Humble Oil & Refining Company, the line extending on south from Refugio to the Humble refinery and shipping terminal at Ingleside on the Gulf Coast.

Moody-Seagraves-Morgan Company, producing affiliation of Gulf Coast Pipe Line Company, is an important producer at Refugio, with daily production around 4900 barrels. Aside from handling that oil, Gulf Coast Pipe Line Company is an important buyer of other crude at Refugio, its various purchases including about 1850 barrels daily from T. P. Morgan and 1900 barrels per day from Mission Drilling Company. Moody-Seagraves-Morgan interests maintain offices in both Houston and San Antonio.

Gulf Line Equipped to Move Crude North and South from Oklahoma

Tulsa.—Shipment of north and south bound crude at same time is now possible on the Oklahoma-Texas trunk line system of Gulf Pipe Line Company following completion of a series of loops late in December in southern Oklahoma. Approximately 27 miles of eight-inch loops were installed to provide a double eight-inch line south from Perryman station, near Tulsa, to Saltillo, Texas. The latter station is the point of intersection of a combination eight- and double six-inch line from Fort Worth that can supply crude from North, Central West, and West Texas, Panhandle and New Mexico fields. Necessary changes in pump station equipment and manifolds have been made to permit this dual traffic.

Completion of Gulf Pipe Line Company's trunk line system from Perryman station to refineries of the Gulf Companies at Toledo, Cincinnati and Pittsburgh has automatically created a heavy demand for crude from the Mid-Continent, while a variety of grades of crude will be available from fields in Texas. Properties of Gypsy Oil Company in Oklahoma, New Mexico and Kansas and those of Gulf Production Company in Texas are believed to be ample to supply the increased crude demand of the Gulf refineries even with proration in effect.



MARKET SECTION

Weekly Comparisons of Permits Granted for New Wells

	Week Ending January 3	Previous week	This week 1929	Total this Month	This month 1929	Total this year	Total this date last year	1929 year total
Arkansas	..	2	5	..	5	..	5	108
California	3	16	21	3	21	3	21	922
Louisiana	10	6	17	10	17	10	17	948
Kansas	4	6	10	4	10	4	10	944
Oklahoma	20	21	31	20	31	20	31	2,830
Texas	64	..	171	64	171	64	171	7,052
Total	101	51	255	101	255	101	255	12,804

Census on Refining Industry for 1929

Washington, D. C.—According to the Bureau of the Census, the total value of petroleum products shipped from refineries in the United States during 1929 aggregated $2,597,370,104 (F.O.B. prices). This figure represents an increase over 1927 of 21.7 per cent, during which year the total value represented $2,133,922,688, the previous census year. The statistics for 1929 and 1927 are summarized in the accompanying table. These figures are preliminary and are subject to revision.

SUMMARY FOR THE INDUSTRY: 1929 AND 1927

	1929	1927	Per Cent of increase
Number of establishments	375	354	5.9
Wage earners (average for the year)	76,840	71,234	7.9
Wages	$ 125,948,505	$ 113,716,705	10.8
Cost of materials, containers for products, fuel, and purchased electric current	$2,055,734,186	$1,752,997,043	17.3
Products, total value	2,611,680,940	2,142,648,503	21.9
Petroleum products and by-products, value	$2,597,370,104	$2,133,922,688	21.7
Other products, value	14,310,836	8,725,815	64.0
Value added by manufacture	555,946,754	389,651,460	42.7

Details of products and their value for the year 1929 are in part as follows: 17,982,832,107 gallons of gasoline and naphtha, valued at $1,579,082,717; 216,226,775 gallons of other light products of distillation, $13,898,196; 2,332,437,794 gallons of illuminating oils, $164,009,087; 16,134,961,225 gallons of fuel oils, $379,682,995; 1,423,414,222 gallons of partially refined oils sold for rerunning, $48,435,537; 1,546,000,126 gallons of lubricating oils, $301,922,011; other products and by-products of refining, $110,339,561.

Oklahoma City.—Effective Thursday morning, January 1, Tidal Refining Company and Pure Oil Company posted their own crude price schedules. These companies have been purchasers in the Mid-Continent for many years but have followed postings of Prairie Oil & Gas Company. New schedules will follow those of Stanolind Oil Company and other major purchasers.

Effective December 25 American Refineries posted for southern Oklahoma crude below 28 degrees 60 cents, 28 to 28.9, 63 cents with two cents spread for each degree above making 39 and above 85 cents.

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	2	5	1	..	..	2	1	3	10	1
California	19	13	14	10	..	..	5	3	7,650	5,625
Indiana	1	3	..	1	..	1	1	1	..	20
Kansas	7	18	4	8	..	4	3	6	3,625	3,950
Kentucky	24	51	13	17	2	24	9	10	5,173	3,928
Louisiana	12	12	5	2	3	3	4	7	1,818	752
Michigan	4	..	3	..	..	..	1	..	390	..
Mississippi	2	..	..	..	1	..	1	..	..	..
New Mexico	3	..	1	..	..	..	2	..	100	..
Ohio	22	32	4	4	9	11	9	17	23	65
Oklahoma	40	48	23	17	4	14	13	17	164,861	68,094
Pennsylvania	4	14	1	11	2	..	1	3	50	35
Texas	85	59	32	23	13	11	40	25	22,308	29,226
West Virginia	21	10	2	3	14	4	5	3	4	27
Alabama	3	..	..	..	..	..	3	..	..	..
Total	249	265	103	96	48	74	98	95	206,012	111,723
Increase	..	..	7	..	..	..	3	..	94,289	..
Decrease	16	..	..	..	26	..	..	..	..	..

MARKET SECTION

Crude Oil Price Quotations

(Revised to January 6, 1931)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Nov. 13, 1930) $2.15

Penna. Grade Oil in National Transit Lines (Other Pennsylvania) (Effective, Nov. 13, 1930) 1.85

Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania) (Effective Nov. 13, 1930) 1.80

Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Nov. 13, 1930) 1.70

Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Nov. 13, 1930) 1.45

Corning Grade in Buckeye Pipe Lines (Ohio) (Effective Oct. 28, 1930)..... 1.25

Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930) 1.14

Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929)... 0.60
*Oil run prior to July 1, 1929 is $2.10 per bbl.

(Posted by Stoll Oil Refining Company)

Oil City, Ky., oil in Stoll lines (Effective Oct. 28, 1930) 1.10

MICHIGAN

(Posted by Dixie Oil Company)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, on gravity basis prior to reduction on Oct. 27, 1930.

(Posted by Pure Oil Company)

Midland, Midland County, Oct. 27, 1930..$1.10

CENTRAL STATES FIELDS

(Posted by Ohio Oil Company)
(Effective Oct. 28, 1930)

Wooster	$1.35	Princeton	1.30
Lima	1.10	Illinois	1.30
Waterloo	1.20	Plymouth	.88
Indiana	.87	W. Kentucky	1.15

CANADIAN CRUDE

(Posted by Imperial Oil Refineries, Ltd.)
(Effective October 28, 1930)

Petrolia	$1.50
Oil Springs	1.57

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co., and Stanolind Crude Oil Purchasing Company, Effective Nov. 1, 1930. Carter Oil Company Same Schedule Effective Oct. 28.

Below 29	$0.65	35-35.9	.92
29-29.9	.69	36-36.9	.95
30-30.9	.73	37-37.9	.98
31-31.9	.77	38-38.9	1.01
32-32.9	.81	39-39.9	1.04
33-33.9	.85	40 and above..	1.07
34-34.9	.89		

Magnolia Petroleum Company Effective October 28.

Below 26	.53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here to 40 and above gravity same schedule as above.

NORTH TEXAS

Posted by All Purchasers Except Magnolia Petroleum Company

Ranger, North Texas, Van, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran, and Nocona crudes:

Below 29	$ .65	35-35.9	.92
29-29.9	.69	36-36.9	.95
30-30.9	.73	37-37.9	.98
31-31.9	.77	38-38.9	1.01
32-32.9	.81	39-39.9	1.04
33-33.9	.85	40 and above..	1.07
34-34.9	.89		

Magnolia Petroleum Company, Effective October 28

Below 26	.53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here to 40 and above gravity same as schedule above.

(Continued on Page 42)

California Prices

Effective September 15, 1930, at 7:00 A. M. the following are the current prices offered by STANDARD OIL COMPANY OF CALIFORNIA

Gravity	Signal Hill	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Playa del Rey†
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70			$ .70	$ .70	3 .70	$ .70	$ .70		$ .55	$ .55	$ .55	$ .55	$ .55	$ .55	
15-15.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
16-16.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
17-17.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
18-18.9	.76	.76	.76	.76	.76	.76			.76	.76	.76	.71	.76		.55	.62	.62	.62	.62	.62	
19-19.9	.82	.82	.82	.82	.82	.82			.82	.82	.82	.77	.82		.55	.70	.70	.70	.70	.70	
20-20.9	.88	.88	.88	.88	.88	.88			.88	.88	.87	.83	.87			.78	.78	.78	.78	.78	$.74
21-21.9	.94	.94	.94	.94	.94	.94			.94	.94	.93	.90	.93	$.92		.86	.86	.86	.86	.86	.77
22-22.9	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	.98	.97	.98	.95		.94	.94	.94	.94	.94	.81
23-23.9	1.07	1.07	1.07	1.07	1.07	1.07			1.07	1.07		1.05	1.04	1.01		1.02	1.02	1.02	1.02	1.02	.84
24-24.9	1.12	1.12	1.12	1.12	1.12	1.12	$1.12		1.12	1.12		1.08	1.08	1.05		1.06	1.06	1.06	1.04	1.04	.87
25-25.9	1.17	1.17	1.17	1.17	1.17	1.17	1.17		1.17	1.17		1.11	1.12	1.09		1.10	1.10	1.10	1.06	1.06	.90
26-26.9	1.22	1.22	1.22	1.22	1.22	1.22	1.22		1.22	1.22		1.15	1.16	1.13		1.14	1.14	1.14	1.08	1.08	
27-27.9	1.26	1.26	1.26	1.26	1.26	1.26	1.27		1.26	1.26		1.19	1.21	1.18		1.18	1.18	1.18	1.11	1.10	
28-28.9	1.30	1.30	1.30	1.30	1.30	1.30	1.32		1.30	1.30		1.23	1.25	1.23		1.23	1.23	1.23	1.15		
29-29.9	1.34	1.34	1.34	1.34		1.34	1.37			1.34		1.26	1.29	1.28		1.29	1.29	1.29	1.19		
30-30.9	1.38	1.38	1.38	1.38		1.38	1.42			1.38		1.29	1.33	1.33		1.35	1.35	1.35	1.23		
31-31.9	1.43	1.43	1.43	1.43		1.43	1.43							1.38		1.41	1.41	1.41	1.27		
32-32.9	1.48	1.48	1.48	1.48			1.52							1.43		1.47	1.47	1.47	1.31		
33-33.9							1.57							1.48		1.53	1.53	1.53	1.35		
34-34.9							1.62	$1.32						1.53				1.59	1.39		
35-35.9							1.66	1.39						1.58				1.65	1.43		
36-36.9							1.72	1.46						1.63							
37-37.9							1.78	1.53						1.68							
38-38.9							1.84	1.60						1.73							
39-39.9							1.90	1.66						1.78							
40-40.9							1.96	1.72													
41-41.9							2.02	1.78													
42-42.9							2.08	1.84													

F. O. B. Ship

KETTLEMAN HILLS*	
35-39.9	$1.10
40-44.9	1.20
45-45.9	1.35
50-54.9	1.50
55 and above	1.65

*Posted by Union Oil Company. †Effective December 18, 1930.

MARKET SECTION

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 49*)

PANHANDLE

Posted by All Purchasers, Effective Oct. 28, 1930

Gray County Crude

Below 29	$ .50	35-35.9	.77
29-29.9	.54	36-36.9	.80
30-30.9	.58	37-37.9	.83
31-31.9	.62	38-38.9	.86
32-32.9	.66	39-39.9	.89
33-33.9	.70	40 and above	.92
34-34.9	.74		

Carson and Hutchinson County Crudes

Below 29	$ .45	35-35.9	.72
29-29.9	.49	36-36.9	.75
30-30.9	.53	37-37.9	.78
31-31.9	.57	38-38.9	.81
32-32.9	.61	39-39.9	.84
33-33.9	.65	40 and above	.87
34-34.9	.69		

WEST TEXAS

Posted by All Purchasers, Effective October 28, 1930

Winkler and Pecos County Crudes:

Below 25	$ .55	31-31.9	.69
25-25.9	.57	32-32.9	.71
26-26.9	.59	33-33.9	.73
27-27.9	.61	34-34.9	.75
28-28.9	.63	35-35.9	.77
29-29.9	.65	36 and above	.79
30-30.9	.67		

Crane, Upton, Crockett, Ector, Ward, Loving, Mitchell,* Howard, and Glasscock Counties, Texas, and Lea County, New Mexico crudes

Posted by All Purchasers, Effective Oct. 28, 1930

Below 25	$ .50	31-31.9	.64
25-25.9	.52	32-32.9	.66
26-26.9	.54	33-33.9	.68
27-27.9	.56	34-34.9	.70
28-28.9	.58	35-35.9	.72
29-29.9	.60	36 and above	.74
30-30.9	.62		

*Magnolia Petroleum Company uses Gravity scale and Coltex Refining Company pays flat price of 60 cents for Mitchell County.

GULF COAST

(Posted by Humble Oil & Refining Company, The Texas Company and Sun Company)

Gulf Coast Crude will be classified as follows in fields designated below:

Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:

"A" GRADE—All crudes conforming to the following tests:

Viscosity—Not less than 100 seconds at 100° F. Saybolt.

Sulphur—Not over .4%.

Beaume Gravity—Not over 25 at 60° F.

Cold test of distillates having a viscosity of 1000 seconds at 100° F, shall not be over 5° F.

"A" GRADE—$1.00.

"B" GRADE — Embraces all Coastal crude which does not meet the test for "A" grade crude:

Below 25	$ .75	26-26.9	.94
25-25.9	.92	27-27.9	.96
28-28.9	.98	34-34.9	1.10
29-29.9	1.00	35-35.9	1.12
30-30.9	1.02	36-36.9	1.14
31-31.9	1.04	37-37.9	1.16
32-32.9	1.06	38-38.9	1.18
33-33.9	1.08	39-39.9	1.20
		40 and above	1.22

Markham (The Texas Company) ..... .75

Posted by Gulf Pipe Line Company, Effective October 30, 1930

High Island	$ .75		
Grade "A"	.80		
Grade "B"			
Below 25	$ .69	33-33.9	.87
25-25.9	.71	34-34.9	.89
26-26.9	.73	35-35.9	.91
27-27.9	.75	36-36.9	.93
28-28.9	.77	37-37.9	.95
29-29.9	.79	38-38.9	.97
30-30.9	.81	39-39.9	.99
31-31.9	.83	40 and above	1.01
32-32.9	.85		
Jennings, La.	.80		

SOUTHWEST TEXAS

Posted by All Purchasers, Effective Oct. 28, 1930

Refugio Heavy crude, below 25 gravity.. .75

Refugio Light crude:

25-25.9	$ .92	33-33.9	1.08
26-26.9	.94	34-34.9	1.10
27-27.9	.96	35-35.9	1.12
28-28.9	.98	36-36.9	1.14
29-29.9	1.00	37-37.9	1.16
30-30.9	1.02	38-38.9	1.18
31-31.9	1.04	39-39.9	1.20
32-32.9	1.06	40 and above	1.22

Mirando crude	$. 75
Salt Flat crude	.90
Darst Creek crude	.90
Pettus crude	1.10
Luling	.75
Corsicana, heavy	.75

Determination of quality, deductions, adjustment for temperature, etc., on oil purchased in Texas, shall be in accordance with the rules and regulations of the Texas Railroad Commission, and on oil purchased in New Mexico shall be in accordance with the rules and regulations of the Corporation Commission of New Mexico.

LOUISIANA-ARKANSAS

All Purchasers Except Magnolia Petroleum Co., Effective Oct. 29, 1930

Pine Island District, Haynesville District, Bull Bayou District, El Dorado District, Rainbow District, Cotton Valley

Below 29	$ .65	31 to 31.9	.77
29 to 29.9	.69	32 to 32.9	.81
30 to 30.9	.73	33 to 33.9	.85
34 to 34.9	.89	40 to 40.9	1.07
35 to 35.9	.92	41 to 41.9	1.10
36 to 36.9	.95	42 to 42.9	1.13
37 to 37.9	.98	43 to 43.9	1.16
38 to 38.9	1.01	44 and above	1.19
39 to 39.9	1.04		

Urania, La.	.75
Bellevue, La.	1.00

Magnolia Petroleum Company, Effective October 30, 1930

Below 26	$ .53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here prices same as schedule above.

STEPHENS

Below 29	$ .54	31 to 31.9	.66
29 to 29.9	.58	32 and above	.70
30 to 30.9	.62		

Smackover	.70
El Dorado, East Field	.70

ROCKY MOUNTAIN FIELDS

(Salt Creek prices effective Oct. 28, 1930)

‡Salt Creek 29-29.9	.69
" " 30-30.9	.73
" " 31-31.9	.77
" " 32-32.9	.81
" " 33-33.9	.85
" " 34-34.9	.89
" " 35-35.9	.92
" " 36-36.9	.95
" " 37 and above	.98
Elk Basin (Effective Oct. 28, 1930)	1.25
Grass Creek light	1.25
Big Muddy	1.00
Lance Creek	1.33
Rock Creek	1.01
Mule Creek	1.20
Rex Lake	1.10
‡Osage (Nov. 1, 1930)	.85
‡Cat Creek, Montana	1.25
Pondera	1.45
Sunburst, Montana	1.55
‡Hogback, New Mexico	1.40
Artesia, New Mexico	.75

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

PERSONAL MENTION-MEN YOU KNOW

W. G. Hamilton, manager of the El Paso refinery of Pasotex Petroleum Company, subsidiary of Standard Oil Company of California, died suddenly December 27. Hamilton was superintendent of the Richmond, California, plant, of the latter company prior to being transferred to Texas in January, 1928, to assume charge of construction work of the El Paso plant.

Jack Kennedy has succeeded W. H. Dyer, Graham operator, as umpire for the Central West Texas district, and will establish headquarters at Ranger.

A son was born to Mr. and Mrs. R. D. Parker, 2404 Rio Grande, Austin, Texas, Thursday morning, January 1. Mr. Parker is attached to the oil and gas division of the Texas Railway Commission. According to official records, young Parker is the first child born in Austin this year.

Ray Sexton, sales representative of W. C. Norris, manufacturer of Tulsa, is now contacting the trade out of the company's Fort Worth branch having been transferred there from the Tulsa offices.

C. F. Dougherty, Tulsa, Mid-Continent sales representative of Larkin Packer Company of St. Louis, has returned from an extensive field trip through the California and West Coast territories. Republic Supply Company in California will distribute the Larkin products on the coast.

Edward R. "Dad" Folmar, who has been purchasing agent for Magnolia Petroleum Company, Dallas, for nearly 20 years, was retired from active duty with a pension on January 1. From a standpoint of continuous service Folmar was the oldest of purchasing agents of the oil industry in Texas, and also probably holds the same distinction in volume of dollars expended for equipment and supplies. His kindly attitude toward fellow employes of the company and representatives of supply houses and manufacturers caused him to be generally known as "Dad."

Lacking only about six months of completing 30 years of service in the oil industry, Folmar made his start on June 2, 1901, at the Newark, N. J., office of Standard Oil Company. He resigned August 1, 1911, to become purchasing agent for Magnolia Petroleum Company, which had been organized the previous April 24 to take over the Texas properties of John Sealy & Company.

John P. David, who has been assistant manager of the fuel oil department of Magnolia Petroleum Company, and a veteran employe, has succeeded Folmar as purchasing agent.

Officials of Dixie Oil Company have been elected to occupy the bulk of the executive positions of Stanolind Oil & Gas Company, which was organized late in 1930 by Standard Oil Company of Indiana to absorb Dixie Oil Company, McMan Oil & Gas Company and Midwest Exploration Company, all fully owned subsidiaries with properties in the Mid-Continent. Frank O. Prior,

FRANK O. PRIOR
Named President
Stanolind Oil & Gas Company

formerly president of Dixie Oil Company, has been elected president of Stanolind Oil & Gas Company, and A. M. McCorkle, former vice-president, secretary-treasurer for Dixie Oil Company, will be retained in the same capacity with the new company, while F. J. Keleher, formerly general auditor will be assistant secretary-treasurer. Directors include Prior, McCorkle, H. G. Schneider, former manager land and geological departments for Dixie Oil Company, and E. F. Bullard, former chief geologist for Dixie Oil Company. Stanolind Oil & Gas Company was incorporated under the laws of Delaware, with capital stock of $30,000,000.

Orden Brechtel, engineer for Parkersburg Rig & Reel Company, has been transferred from the company's plant at Parkersburg, West Virginia, to Fort Worth to become district engineer in North and West Texas.

John J. McPolan has been appointed general superintendent in Texas, Louisiana and Arkansas for Magnolia Pipe Line Company, with headquarters at Dallas. McPolan succeeds P. J. McNamara, who left the services of the company a few months ago. In recent years McPolan has been engaged with special assignments to foreign countries.

Alexander Deussen, consulting geologist, Houston, is recovering from an operation at the Cook Memorial Hospital at Fort Worth, Texas.

Changes in the personnel of Standard Oil Company of California, effective January 1, 1931, include the election of J. H. Tuttle, G. E. Kennedy, A. S. Russell and R. K. Davies as directors, and H. D. Collier and R. W. Hanna as vice-presidents; while J. F. Brooks was elected assistant vice-president, V. E. Palmer, treasurer, and G. J. O'Brien, assistant treasurer.

Dr. Harold Hoots was recently elected president of the Branner Geological Club, which is composed largely of Stanford University graduates residing in Southern California. W. D. Rankin was elected secretary and treasurer.

Joseph Leiner, geologist, formerly of New York and now located in Brownwood, Texas, who has recently developed a gas property near Brownwood, in Brown County, Texas, is on a special geologic mission to Pittsburgh. He also expects to visit New York before returning to Texas.

Wyman Howells, district sales representative, Reading Iron Company, 1302 First National Bank building, Pittsburgh, is making a good recovery and will resume his duties in the near future, following an operation for appendicitis.

John H. Williams, 52, owner of producing properties in the Breckenridge, Texas district, died at his home in Dallas December 27. Prior to becoming an independent operator, Williams was connected with Sun Oil Company. He is survived by his wife and two sons, John H., Jr., and Charles Williams, all of Dallas.

Jack C. Ballagh, secretary of Patterson-Ballagh Corporation, Los Angeles, recently returned from a two months' trip to Europe, where he laid plans for an expansion of field service in the distribution of Bettis Protectors. On his return trip to Los Angeles he visited principal oil fields in the Mid-Continent. Mrs. Ballagh accompanied him.

C. S. Carter, oil field representative of the American Well Works, Aurora, Illinois, sailed December 31, for Colombia and Venezuela, South America, on a business trip in the interests of his company. Mr. Carter expects to be away several months during which time he will cover the oil fields of those countries in further introducing oil well pumping units and other equipment manufactured by the company.

PIPE LINE ACTIVITIES

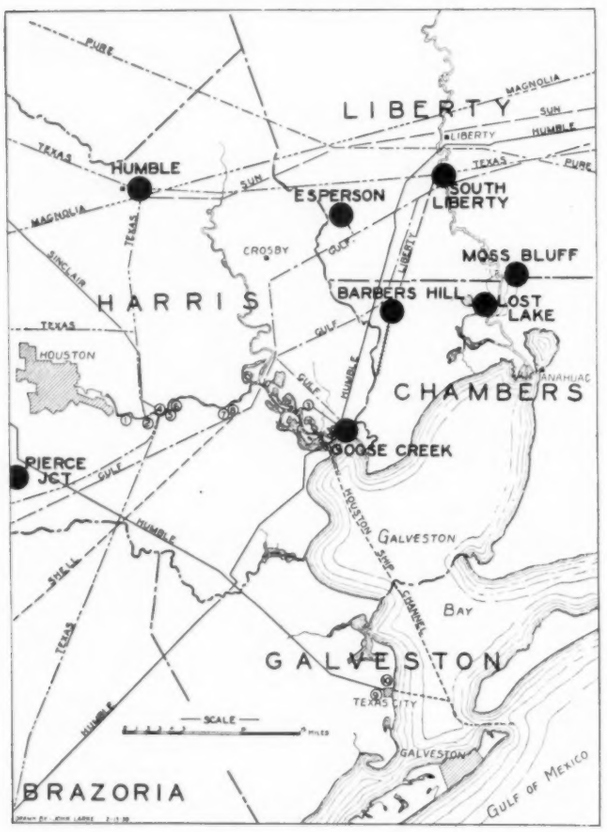
NEWS ◆ PERSONAL ◆ TECHNICAL ◆ ENGINEERING

Atlantic Buys Pipe Line On Gulf Coast

HOUSTON, Texas.—Entrance of Atlantic Refining Company, Philadelhpia, through subsidiaries as a purchaser and transporter of Gulf Coast crudes became effective January 1 with the purchase of the pipe line system, field storage, and barges and tug boats of Liberty Pipe Line Company. The deal also includes the Texas City refinery and terminals of Terminal Oil & Refining Company. Mills Bennett, Houston, is president of the latter two concerns. Although the change of ownership was made effective as of January 1, the transaction was consummated on January 3.

Neither the purchasing nor the selling interests would reveal the consideration involved in the deal, but reports which were circulated placed the total sale price at approximately $1,000,000.

Atlantic Pipe Line Company, transportation subsidiary of Atlantic Refining Company, took possession of Liberty Pipe Line Company's system, which has been handling about 12,000 barrels of crude daily from Barbers Hill field, Chambers County, through a 6.3-mile six-inch line to a barge wharf on Cedar Bayou. The Barbers Hill unit includes a pipe line station, two 80,000-barrel steel tanks in the field, and four 5000-barrel tanks at the wharf, with three barges and tug boats in service. The new owners will continue to barge the crude to the Texas City terminals, where crude will be loaded for coastwise movement.



Map showing location of Barbers Hill with reference to nearby oil activities, that portion of the Liberty Pipe Line Company's line most recently sold being shown by hacked line. The numbered circles indicate refineries, (10) being location of the refinery acquired by Atlantic Refining Company.

Operation of the Texas City skimming and cracking plant of Terminal Oil & Refining Company is not contemplated by the new owners, although it will be available to handle approximately 4000 barrels of crude daily. The equipment includes one 2000-barrel daily capacity Jenkins cracking unit, and topping stills capable of handling about the same amount of crude. There are eight 55,000-barrel steel tanks on the Texas City site, aside from a total of 60,000 barrels of steel tankage at the refinery.

Atlantic Oil Producing Company will function as the crude purchaser for Atlantic interests on the coast, and will pay current posted price quotations of Humble Oil & Refining Company, although Gulf Pipe Line Company is paying about 20 cents per barrel less on popular grades of Gulf Coast crudes. Atlantic interests have been large purchasers of Gulf Coast crudes, and recently contracted for a large volume in the Refugio field, but in all instances other marketing and pipe line companies delivered the oil to tidewater. Atlantic Pipe Line Company has been operating a 10-inch trunk line from West Texas, by way of shallow, high gravity fields in Coleman County, Central West Texas, to tank farm and tanker terminals at Atreco, near Beaumont, since January, 1929, and last summer extended the West Texas unit with an eight-inch line to Hobbs, New Mexico.

Properties of Liberty Pipe Line Company also formerly included a six-inch oil carrier connecting Barbers Hill field with the South Liberty field to the northeast, but that unit was sold by the Mills Bennett interests during the past year to Sun Pipe Line Company, which made connection at Liberty Station with its trunk line to tidewater on the Beaumont-Port Arthur ship channel. Sun Pipe Line Company has been running around 8000 barrels of crude daily from Barbers Hill.

Aside from Sun Pipe Line Company and the Atlantic interests, the only other company which is buying Barbers Hill crude is Humble Oil & Refining Company, its subsidiary, Humble Pipe Line Company having a connection from the field to a nearby trunk line, through which about 1200 barrels of Barbers Hill crude has been handled daily during the immediate past. The above three pipe line systems are handling all Barbers Hill production.

Gulf Pipe Line Company's trunk line system from Lynchburg to Sour Lake station passes near Barbers Hill, but the company is not taking oil from the field.

Although it disposed of the Barbers Hill-Texas City properties, comprising the bulk of its remaining physical assets following the earlier deal with Sun Pipe Line Company, Liberty Pipe Line Company as an organization was not sold to Atlantic Pipe Line Company, and it will continue to function under the Mills Bennett interest ownership as a purchaser, seller, and handler of oil at other points.

Santa Barbara, Calif.—A 2600-foot pipe line, to be used as a flow line in case Bolsa Chica Oil Corporation's Tideland test in the ocean off Coal Oil Point, is being rushed to completion. If needed upon completion of the well, this will be the first pipe line ever extended into the ocean to handle a discovery well.

PIPE LINE ACTIVITIES

NEWS ◆ PERSONAL ◆ TECHNICAL ◆ ENGINEERING

Pictorial Story of the Building of a Modern Pipe Line

By JACK LOGAN
Staff Representative

Right of way gang dragging off boulders

Pipe cleaning gang knocking off bells and spigots

General view of pipe cleaning gang

Line-up gang Caliphers ready to take hold of pipe

Line-up gang stabbing pipe

TO one who has not given any particular thought to the subject, the construction of an oil or gas pipe line may seem a rather drab and simple procedure—one of the more elemental phases of the petroleum industry—calling forth mental pictures of joints and joints of pipe being put together and buried in a ditch, perhaps.

In the beginning, it is true, pipe lines were simple things, but today they are far from simple, great strides of progress having been made in their construction, particularly during the past few years.

The accompanying series of photographs illustrates vividly the extensive work involved in construction of a modern welded line, a representative view illustrating practically every operation required. The pictures are used by courtesy of the Texas Pipe Line Company, which obtained them from the most part along its recently completed all-electric welded trunk oil line leading from New Mexico and West Texas to the Gulf Coast.

One of the earliest pipe lines used in the petroleum industry, a natural gas conveyor laid from a producing well to Titusville, Pennsylvania, in 1872, was made up of wooden joints. Then came small screw lines and the rubber gasket joint lines, and finally the welded lines of today.

Only a few years ago all ditches for pipe lines were dug by hand, and practically all pipe was screw coupled. All the pipe had to be hauled out along the right of way by teams and trucks and unloaded by hand. There were no pipe laying booms. All the protective coating that a line got, if any, was inferior asphalt poured in on top of it. On lines where screw couplings were used, it was necessary to put in special expansion joints or "swings." Minimum requirements for a "swing" consisted of five elbows and four nipples, and according to those familiar with the device, "four swings equaled one stop cock." The net result was that tremendous friction was built up in the line, offering great resistance to the flow through the pipe. Now special expansion joints are used, and furthermore, the pipe is buried deeper, following substitution of mechanical for manual ditch digging, and consequently there is not as much expansion of pipe as formerly.

Until recently screw couplings were used almost entirely, and for handling the pipe in putting the joints together by that method a crew of 18 men was required, consisting of one stabber, two men

(Continued on Page 77)

Directing line-up of pipe

Line-up gang straightening sections after line-up

Tacking welder with portable welding machine

General view of "firing line"—electric welding

First or pressure bead on firing line

PRAIRIE EXPLAINS CURTAILMENT OF CRUDE PURCHASES

(*Continued from page 26*)

"Prairie Oil & Gas Company has other customers for crude oil at the present time in amount less than it is producing under the restricted operations of proration. We will continue to supply these customers in a manner that they will not be crippled in the competitive field on account of the price they have to pay for crude, but we must meet such competition from the oil which we produce and own and cannot do it through the purchase of oil which costs us more than we can get for it.

"Please extend to your committee our profound gratitude for the compliment they pay us through their intimation that our position and importance to the oil industry is so great that we owe more responsibility in this matter than Standard Oil Company of Indiana, Pure Oil Company, Standard Oil Company of New Jersey, Dutch Shell, the Gulf Refining Company and all the rest of the concerns represented on your committee."

Mr. Reeser left Tulsa Friday night to present the facts of the situation to leaders of the petroleum industry represented in the directorate of the American Petroleum Institute which convenes in New York City on Thursday, January 8. Harry F. Sinclair, chairman, Sinclair Consolidated Oil Corporation, and W. S. Fitzpatrick, chairman of the board of directors, Prairie Oil & Gas Company, are expected to attend the New York City meeting. Current rumors that the merger between Sinclair Consolidated Oil Corporation and Prairie Oil & Gas Company is still pending and that final consummation of the deal had been held up pending the latter's ability to cut off from its undesirable connections were reported as denied by Mr. Sinclair in a statement to the press during his recent trip to Tulsa.

Standard of Indiana to Absorb Part of Stripper Oil

Tulsa.—The Chicago office of Standard Oil Company (Indiana) has made the following statement in regard to relief to be given by its subsidiary companies to stripper wells:

"Without waiting for termination of negotiations for relief of stripper well owners subsidiaries of Standard Oil Company (Indiana) have arranged to make their own physical connections with leases adjacent to their lines. As result Stanolind Companies will soon be taking 12,238 barrels daily from wells in Oklahoma and Kansas cut off by Prairie Oil & Gas Company in December and on January 1 further connections being made wherever practicable.

"Similar action by other purchasers will provide market for 15,000 barrels daily from stripper wells. Remaining 14,500 barrels too distant from purchasing companies' lines to be marketed except through Prairie Oil & Gas Company gathering lines. The purchasing companies are unwilling to meet Prairie's demand for full charges on the use of its gathering and purchasing facilities as doing same would mean paying at least 30 cents a barrel premium for the oil which can be gathered elsewhere without any additional cost.

"Kansas has apparently not understood that the offer by committee of purchasers was that if Prairie would run the remaining 14,500 barrels from stripper wells the purchasing companies would buy an equivalent amount from Prairie's own leases at wells near their lines. This exchange of oil would give Prairie a new outlet equivalent to the amount Prairie would continue taking from stripper wells and obviate the necessity of increasing storage.

"This was considered an eminently fair proposition. While purchasers have done much for distressed producers in providing outlets for all but 14,500 barrels of the oil from independent wells cut off by the Prairie it is difficult to do more unless Prairie can cooperate. Standard of Indiana has been doing everything within reason to aid producers despite the fact it is losing market for 30,000 barrels daily formerly caried through Stanolind lines to Sinclair refinery at East Chicago and so need less oil instead of more."

NOVEMBER OIL STATISTICS REFLECT IMPROVEMENT

(*Continued from page 24*)

smaller in the future, while the foreign market for refined petroleum products will probably become increasingly difficult to maintain. It is seen, therefore, that American producers and refiners must maintain close vigilance over their production schedules, in order to prevent the production of more than actual and anticipated requirements of both the domestic and foreign markets.

The following summary, prepared by the United States Bureau of Mines, shows the supply and demand situation for the month of November and the 11 months ending November 30, 1930:

SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke and asphalt in thousands of barrels of 42 U. S. gallons)

	Nov. 1930	Oct. 1930	Nov. 1929	Jan.-Nov. 1930	Jan.-Nov. 1929
New Supply:					
Domestic production:					
Crude petroleum	68,174	72,696	78,758	829,280	926,400
Daily average	2,272	2,345	2,625	2,483	2,774
Natural gasoline	4,238	4,326	4,504	47,538	47,814
Benzol	187	204	245	2,506	2,817
Total production	72,599	77,226	83,507	879,324	977,031
Daily average	2,420	2,491	2,784	2,633	2,925
Imports:					
Crude petroleum	4,467	5,061	4,554	57,402	73,044
Refined products	2,807	3,799	3,327	40,176	27,374
Total new supply, all oils	79,873	86,086	91,388	976,902	1,077,458
Daily average	2,662	2,777	3,046	2,925	3,225
Increase in stocks, all oils	[1]1,488	[1]3,678	[1]3,042	[1]16,360	64,699
Demand:					
Total demand	81,361	89,764	94,430	993,262	1,012,760
Daily average	2,712	2,896	3,148	2,974	3,032
Exports:					
Crude petroleum	1,765	2,167	2,579	22,367	24,312
Refined products	7,776	11,803	10,565	123,231	124,364
Domestic demand	71,820	75,794	81,286	847,664	864,084
Daily average	2,394	2,445	2,710	2,538	2,587
Excess of daily average domestic production over domestic demand	26	36	74	95	338
Stocks (end of month):					
Crude petroleum:					
East of California	373,965	375,462	386,383	373,965	386,383
California[2]	144,205	143,381	153,454	144,205	153,454
Total crude	518,170	518,843	539,837	518,170	539,837
Natural gasoline at plants	596	559	514	596	514
Refined products	154,040	154,892	145,357	154,040	145,357
Grand Total Stocks, all Oils	672,806	674,294	685,708	672,806	685,708
Days' supply	248	233	218	226	222
Bunker oil (included above in domestic demand)	3,794	4,463	4,110	46,905	48,132

[1]Decrease. [2]Includes residual fuel oil.

Coring in Deep Test

Bakersfield, Calif.—Shell Oil Company is coring in hard gray sand at 8975 feet in Williams 1, a test in the Semitropic district and now the deepest active well in California. The last casing was a string of 9⅝-inch at 4702 feet, giving the well considerably more than 4000 feet of open hole.

Oklahoma--Kansas Field Notes

FLOYD L. SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Decision on Proration Attack Delayed Three Weeks

Oklahoma City.—Failure of attorneys to agree on what constitutes physical waste of crude oil was responsible for a delay of three weeks to a month in securing a decision on the proration attack which was carried on in Oklahoma City last week. Attorneys reopened argument after Judges John H. Cotteral, F. E. Kennamer, and R. L. Williams had announced they were ready to rule on the case.

The fight is being waged by Marco Oil Company, Capitol Producing and Refining Company, Champlin Oil and Refining Company, Century Petroleum Company, and Oils Incorporated.

Following up its charges made during the recent proration hearing, Champlin Oil and Refining Company filed affidavits in Federal Court alleging 10 major companies in the Oklahoma City pool with overproduction of wells and alleged specific violations in the cases of 95 wells in a letter filed with the corporation commission. The Federal Court affidavits, made by R. L. Clifton, petroleum engineer for Champlin Oil and Refining Company, cover the period from October to December, 1930. He alleged that, acting under instructions from the company, he employed checkers and watchers who worked under his supervision, reporting the flow on 57 wells in the Oklahoma City field. He charged that all wells at some time during the period, produced oil not reported to the field umpire. According to the affidavits, the companies produced from 13 to 65 per cent more oil than was reported by the umpire.

In the hearing before the corporation commission, December 30, 1930, H. G. McKeever, attorney for Champlin Oil and Refining Company charged the violations. C. C. Childers, chairman, stated that if evidence were produced the companies alleged to have committed such violations would be cited.

Change Method of Prorating Oklahoma City Wells

Oklahoma City.—The method of prorating the Oklahoma City pool was changed from the time basis to a percentage of potential basis effective Saturday, January 3. Four-hour gauges will be taken and potentials estimated for individual wells by multiplying the four-hour gauge by six. Under the new plan the field will be allowed to produce 1½ per cent of the potential it being optional with the operators as to how this amount is taken. Potential tests will be taken each month. Upon the basis of recent potential estimates the new method will give the pool about the same output as has been allowed under the plan in force during the last quarter of 1930.

Cumulative production in the pool passed the 42,000,000 barrel mark at the end of the year having produced over a period of two years and 27 days. T. B. Slick's Wespaco 1 NE SW SE, Section 34-12n-3w, which was completed late in October and closed in after taking initial gauges, was opened, January 1 and produced 14,395 barrels in six hours. On the same date Phillips Petroleum Company's Day 1, Section 2-11n-3w, also completed late in October, was opened four hours and 20 minutes for a gauge of 10,647 barrels. Other gauges on January 1 were as follows: T. B. Slick Estate's Classen 3, Section 2-11n-3w, 8164 barrels in four hours; Don Leon Oil Company's Hunsicker 1, Section 2-11n-3w, 3800 barrels in approximately 40 minutes. T. B. Slick Estate's Campbell 1, first producer in Section 3-11n-3w, 12,159 barrels in eight hours.

Phillips Petroleum Company's Clayton 1 NEc NW, Section 10-11n-3w, had top of the Wilcox at 6303 feet. Initial gauge was 5868 barrels in four hours along with 25,000,000 feet of gas. Total depth is 6565 feet. Wirt Franklin Petroleum Corporation's Theimer 5 SW SW SE, Section 12-11n-3w, thirteenth and last well on the lease, is estimated as good for 200 barrels of oil an hour with a relatively small amount of gas. Total depth is 6519 feet in sand.

Complete Second Deep Well in Perry District

Tulsa.—Magnolia Petroleum Company's Wolleson 1 NE SE NE, Section 21-21n-2w, gave the Perry pool its second deep sand gusher when completed last week for an initial flow of 2700 barrels in 24 hours. It was five feet in the Misener sand at 5224 feet and was shut in awaiting additional tankage. Champlin Oil and Refining Company is laying connections to the well. Same company's A. Young 1 Section 22, about ¼-mile northeast of the Wolleson 1, was the discovery well in the deep sand having been completed for 1400 barrels in February, 1930. It is now making 500 barrels daily under proration. No other drilling is now under way.

Discover New Kansas Oil Pool; Locations Show Increase

Wichita, Kansas.—Activities in Kansas during the past week include the discovery of a new oil pool and the announcement of 13 locations as compared with eight the previous week. Skelly Oil Company's Miles 1 NEc, Section 30-27s-10w, two miles northwest of the town of Cunningham and approximately 25 miles from the nearest production of any sort, penetrated a pay sand from 3385 to 3393 feet where it swabbed 141 barrels of 36 gravity oil in 12 hours. Production is believed to be coming from the Kansas City lime series and the new well will probably be deepened when additional tankage has been constructed.

Approximately 14 miles southeast of the town of La-Crosse in eastern Rush County, Flynn et al's Fannen 1 cSW, Section 11-18s-16w, is estimated at 15,000,000 cubic feet of gas from a sand topped at 3497 and drilled to 3500 feet.

Magnolia Petroleum Company's Vickers 1 SWC, Section 17-27s-2e, first well in the section, is swabbing 10 barrels an hour from Chat encountered between 2923 and 2945 feet. It extends the pool two locations east in the northeastern part. National Refining Company et al's Gsell 1 SE SE SW, Section 1-27s-1e, two miles northwest of the pool, had the top of the Wilcox at 3358 and water from 3370 to 3372 feet. It will be abandoned.

W. C. McBride's Whitright 1 NE NE SW, Section 30-19s-1w, original shallow producer in the section, has been deepened to 3421 feet where its initial gauge was 2050 bar-

rels. This well had produced from a shallow horizon for several months and was deepened on the basis of completion of Mid-Kansas Oil and Gas Company's Whitright (Garrett) 1, which was originally completed for 235 barrels in the upper zone but later deepened to the Viola lime where it gauged 3324 barrels the first 24 hours. Production was obtained from a pay in the Viola between 3407 and 3414 feet.

Complete 100-Barrel Well Near Tatums Pool

Tulsa.—Frank Gouin et al's Burton 1 SE SW NE, Section 31-1s-2w, approximately 1½ miles southeast of production in the Tatums pool, was completed during the past week for an estimated 100 barrels daily from broken sand logged at 1834 to 1844 feet and solid sand at 1844 to 1962 feet.

The Tatums pool is located in an area of narrow, sharply dipping structures adjacent to and on the south side of the Arbuckle Uplift. The new well is more likely the discovery of a new structure than an extension to the main pool.

L. J. Woodruff is drilling below 1450 feet in his Brady 1 NW SW SW, Section 32-1s-2w, about 1¾ miles southeast of production in the Tatums pool and three-eights of a mile southeast of Gouin et al's Burton 1. Carter Oil Company's J. T. Grooms 1 SE NE NE, Section 24-1s-3w, on the east side of the pool, is waiting on cement to set at 1905 feet. Oil sand was logged between 1920 and 2033 feet.

Three-quarters of a mile northwest of production, Magnolia Petroleum Company's R. F. McCrory 1 SE SE SE, Section 10-1s-3w, is waiting on cement to set on the last string. Oil sand was topped at 2353 feet and penetrated to 2363 feet, the present total depth of the well. Same company is waiting on cement to set in its Mose Dickerson 3 NW NE SE, Section 24-1s-3w; oil sand was topped at 2020 feet and penetrated 10 feet. The test is located only 100 feet north of the company's Mose Dickerson 1, which was drilled to a total depth of 4240 feet and abandoned without having encountered the usual productive series.

Magnolia Petroleum Company's Henry Carter 3 NW SE SW, Section 14-1s-3w, is a diagonal southeast offset to Lesh and McCall's Rufus Hooks 1, which recently extended production one-fourth of a mile north.

Cleaning Out Old Well Northeast of Marietta

Tulsa.—Batson and Starritt are preparing to clean out approximately 75 feet of cavings in their Dillard 1 cSE NE NW, Section 25-6s-2e, about five miles northeast of Marietta. There is about 100 feet of oil in the hole from sand logged at 1585 to 1596 feet and recently shot by the present operators. This is an old well drilled several years ago by the Schermerhorn-Ardmore Company and abandoned at a total depth of 4433 feet.

Konowa Well Gets Production in Stray Sand

Tulsa.—Gypsy Oil Company has discovered a stray sand in its Charty 1 NE SE SW, Section 29-6n-6e, most southwesterly drilling well in the Konowa pool. It flowed 341 barrels in four hours and 40 minutes Friday, January 2, from a total depth of 2609 feet and the following day was flowing at the rate of 125 barrels an hour.

Seek Water Shut-off in Marshall County Well

Tulsa.—Mutual Oil Company is cementing for a water shut-off at 300 feet in its Commerce Trust Company 1 SE, Section 36-5s-5e, on the southeast end of the Madill pool. The test is showing some gas which operators expect to test when water has been shut off. In the southern part of the county, McCrory and McCrory are bailing down to test for water shut-off in their Adams 1 NE NE SW SE, Section 31-7s-6e, wildcat test near the town of Isom Springs. Some high gravity oil is showing from three feet of sand topped at 523 feet.

Wewoka Townsite Activity

Tulsa.—Deep Rock Oil Corporation's Smith 2 (20 acres) SW NW NE, Section 30-8n-8e, produced 1097 barrels from 36 feet of Wilcox topped at 3904 feet. Total depth is 3940 feet. Mid-Kansas Oil and Gas Company's and Ramsey Petroleum Corporation's Davis 3 SE NE NW, Section 30-8n-8e, produced 1645 barrels in two hours and 40 minutes from 33 feet of Wilcox topped at 3822 feet. Total depth is 3855 feet. Ramsey Petroleum Corporation is reported to have purchased SW SW and the N½ NW SW, Section 19-8n-8e, a 60-acre tract due north of the rich Davis lease owned jointly by the latter and Mid-Kansas Oil and Gas Company.

Healdton-Hewitt Area

Tulsa.—Roy Johnson and F. W. Merrick, Inc., are fishing for drill pipe lost in their Gladney-Williams 1 NE NE SE, Section 9-4s-2w. Showings of oil have been encountered at 1280 to 1284 feet and 1372 to 1382 feet. Operators were preparing to core another sand at 2100 feet when the pipe was lost. This test should prove exceptionally interesting in view of its location approximately one-half mile east of the southeast end of the Healdton pool and one mile west of the Hewitt pool. Twelve horizons between 685 and 3500 feet, revealed shows of oil or gas in the former pool and 10 horizons were encountered in the latter pool between 400 and 2700 feet.

Duncan District Active

Tulsa.—Junior Oil Company's A. M. Thompson 1 SE SE, Section 1-1n-7w, approximately four miles east and five miles north of Duncan, is rigging up rotary and will be drilling within a few days. W. O. Smythe et al have cemented surface casing at their House 2, NW NW NW, Section 29-2n-8w, about 13 miles northwest of Duncan. George Pace has resumed drilling in his Pruitt 1, cSW SE, Section 8-1n-9w, four miles northwest of the Oil City pool in eastern Comanche County. Operations were shut down on this test at 700 feet prior to the Christmas holidays.

Abandons Sulphur Dome Test

Houston.—Union Sulphur Company's Fee 764, located on the southwest flank of Sulphur Dome, Calcasieu Parish, Louisiana, in Section 29-9s-10w, has been abandoned after failure to produce from various horizons which were tested. The well was interesting by virtue of drilling far into salt. It tested salt water at 3325 feet, drilled deeper, hitting the top of salt at 4450 feet, and was still in salt at 6475 feet, when plugged back. Then several of the shallower sands which had been penetrated were tested but without developing production.

Seek Conference of Oil Men From Nine States

OKLAHOMA CITY.—Governor William J. Holloway of Oklahoma and Governor Clyde Reed of Kansas, upon the hearty approval of the governors-elect of the two states, issued a call for the governors of oil producing states to send representatives to a conference to be held January 15, in Washington, D. C., to discuss plans for affording immediate relief to the basic industries of the states. The governors of Texas, Louisiana, Colorado, Wyoming, Montana, New Mexico, and California each were asked to send not less than 25 representatives to the conference with the stipulation that 20 members of each delegation be oil men. Governor Holloway indicated that Oklahoma would be represented by 35 oil and business leaders headed by Wirt Franklin as chairman. The governors' message to the various oil producing states was as follows:

"On account of the dire distress in the petroleum industry of the United States and with particular reference to saving 300,000 small wells having a settled daily production of 500,000 barrels from certain abandonment if present conditions continue and the throwing out of employment of hundreds of thousands of men employed in operating them and employed in kindred industries dependent upon the oil industry, thus causing great distress to their families, we have decided to ask the governors of the oil producing states to join us in calling a conference at Washington to be held at the Mayflower hotel commencing at 10 a. m., January 15, for the purpose of working out plans for immediate relief of this great basic industry.

"The farmers and landowners of the oil producing states own one-eighth royalty in all the oil produced and in addition the oil producing companies have under lease millions of acres for which an annual rental of $1 per acre is paid in addition to the bonus or purchase price of the leases themselves, which has gone far to pay the farmers mortgages, taxes, and furnish him with a living during recent periods of low-priced farm products and crop failures so that relief to the petroleum industry is also to a great extent a farm relief measure.

"The emergency is so great that any considerable delay will result in the destruction in the petroleum industry particularly of 15,000 to 20,000 of individual producers engaged therein, known as independents, as well as independent refiners and marketers.

"The present situation in our opinion has been brought about by a loss of market for oil produced in the United States occasioned by ever increasing imports of crude oil and refined products, especially gasoline, which imports have absorbed in large measure the markets of the eastern states which were formerly supplied by oil produced in the eastern states, in the Mid-Continent field, and California.

"The whole southwest is dependent to a great extent directly or indirectly on the oil industry, which in turn supports many other lines of business engaged in manufacture of steel products, machinery, and other oil well supplies.

"In fact, the distress in the petroleum industry is not local to the states producing oil, but is being felt by the whole United States through a loss of purchasing power amounting to hundreds of millions of dollars per annum in the 19 states producing and refining oil by reason of which relief for the petroleum industry would automatically bring a measure of relief to the entire country.

"The plan contemplated is the appointment by the governor of each oil producing state of 25 or more accredited delegates from each state, 20 of whom should represent the oil industry and five delegates from each state should represent the interest of the people generally.

"May we count on you as the governor of your state to join us in making this call and appointing 25 or more delegates to represent your state? Due to the emergency of the matter, will you please wire answer at earliest possible date to Governor Holloway."

Governors Accept Invitation

Tulsa.—Governors Dan Moody of Texas, William H. Adams of Colorado, and Arthur Seligman of New Mexico have wired acceptance of the invitation of the governors of Oklahoma and Kansas to attend the proposed conference at Washington. Governors Parnell of Arkansas, Emerson of Wyoming and Erickson of Montana have indicated willingness to participate but had not wired formal acceptance Tuesday. Governor Young of California advised that he had turned the invitation over to his successor.

Governor Moody Names Texas Delegation

Austin, Texas.—Following a message sent out by Governors Holloway and Reed of Oklahoma and Kansas respectively, to governors of all other oil producing states requesting that representatives be sent to a conference to be held January 15, in Washington, D. C., to discuss plans for affording immediate relief to the basic industries of the states, Governor Dan Moody named the following to comprise the Texas delegation:

T. J. Mullin, Houston; S. D. McIlroy, E. R. Mayer and Joe Danciger, Amarillo; B. F. Robbins, Big Spring; Rupert Ricker, San Angelo; Claud Wild, Fort Worth; T. E. Cranfill, J. A. Deering, and Geo. F. Hyer, Houston; E. H. Eddleman, Wichita Falls; Judge Hunter, Abilene; Tom Grisham, Abilene; Barney Flynn, Tom F. Hunter, Orville Bullington, and Walter Campbell, Wichita Falls; Jim Dunnigan, Breckenridge; Jake Sandefer, Breckenridge; A. H. Bell, Waco; Captain J. F. Lucey, Dallas; Roy Jones, Wichita Falls; R. R. Penn, Dallas; Geo. Marshall, Laredo; Harry Pennington and Claude Witherspoon, San Antonio; R. B. Morris, Houston; W. D. Conway, Ranger; Frank Kell, Wichita Falls; J. E. Spencer, Cisco; E. L. Smith, Mexia; Jim Whear and Cecil Lockhart, Pecos; W. M. McGregor, Wichita Falls; W. C. Stroube and R. L. Wheelock, Corsicana; Guy Blount, San Antonio; T. W. Gregory, Houston; J. P. Nash and Ralph Ogden, Austin; Tom Bryant, Cross Plains; C. L. Morgan, Fort Worth; B. H. Blakeney, Midland; J. J. Yowell, San Angelo; R. F. Windfohr and Dr. E. R. Riggs, Graham; Nelson Puett, Luling; Lutcher Stark, Orange; Earnest May, Fort Worth; J. E. Kilgore, Wichita Falls; C. S. Richardson, Olney; O. W. Killiam, Laredo; Arthur Seeligson, Wm. Morgan, Earle Frates and F. P. Zoch, San Antonio; P. P. Collum, Wichita Falls, and W. A. Moncrief, Fort Worth.

Harris County Test Abandoned

Houston.—W. C. Turnbow et al have abandoned their wildcat, Miller 1, located three miles east of Deer Park on a 40.95-acre tract in the Arthur McCormick Survey, Harris County. The abandonment depth was 6350 feet. In that same general area but slightly farther south Strang Petroleum Corporation last summer abandoned a wildcat, J. W. Good 1, at 6125 feet; it was located in Lot 28, Perry Subdivision, E. Brinson Survey. Indication of structure was given in this area in 1928 through torsion balance work.

North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Howard-Glasscock Only Area In Texas Showing Increase

FORT WORTH, Texas.—The Howard-Glasscock County district is the only officially prorated area in Texas to score an increase in production allowance at the start of the new year. An increase of about 8000 barrels was gained for the above district through the receivers for Cosden Oil Company having resumed paying posted prices for crude purchases, and indicated willingness of producers to sell oil to the company while it is operating under receivership. The receivers attempted to introduce a flat 50-cent price schedule in the field on November 28, but producers withdrew their connections and elected to limit production to takings of other buyers. This action caused the output of the district to be placed at 14,541 barrels daily in December. Crude nominations of pipe line companies for January indicate a market for about 25,964 barrels daily.

The Yates, Van, Pettus, Darst Creek, Winkler and Ector fields are the only prorated areas in Texas that are allowed to produce a daily average of more than 100 barrels per well during January. The former leads by a wide margin with an average of 223.75 barrels daily from its 400 flowing and pumping wells, while its potential is listed at 5,510,934 barrels daily. This potential has been carried forward on nearly all wells for more than six months without revision, and exaggerates the true figure. Van field is to average 146.72 barrels daily per well during the first half of January, and at the close of December its 187 wells were credited with a potential of 371,450 barrels via 11/16 inch choke used on all flowing wells. The true potential of Van is believed to be four times greater. The 25,998 barrel daily potential accredited to Ector County represents average unit potential, and actual potential is slightly greater, as some units have more than one well on same.

Downward revision of potential production of the six oil producing counties in the Texas Panhandle is expected to occur when a re-check on all wells is completed by Umpire H. J. Corcoran, who has announced that 48-hour wide-open gauge of wells will begin January 8 and terminate within 12 days. The current potentials carried on proration tables for the district have not been revised in several months.

Similar steps to reduce superfluous potentials in the North Texas district were taken recently when the Texas Railroad Commission ordered a 72-hour gauge of all wells by pipe line companies. The compilation of this data has not been completed.

Regular monthly pumping gauges of wells in the Howard-Glasscock County district have been injurious to some wells, and the proration advisory committee has elected to discontinue the practice to some extent. A substitute plan will be to have wells of less than six months age take a 10 per cent reduction in potential, while older wells will be reduced only five per cent in potential when actual gauge is not taken. Heretofore non-gauged wells have been cut 10 per cent of former potentials.

Hobbs field, New Mexico, is enjoying a larger daily yield per well average than any of the major fields in Texas, and during the first half of January will average 234.89 barrels daily per well. This field has an average unit potential of 1,081,878 barrels from 132 flowing and two pumping wells. The allowance for this field is 31,475 barrels daily.

LATEST PRORATION DATA ON TEXAS-NEW MEXICO FIELDS

	No. Wells	Official Daily Pot'l Production	Maximum Daily Prod. Allowance	Percentage of Pot'l Prod. Allowed	Daily average yield per well
Texas Panhandle—					
Gray County	732	89,485	28,752	32.13	39.28
Hutchinson County	925	22,193	7,145	32.19	7.72
Carson County	232	11,287	3,389	30.02	14.61
Moore County	20	845	390	46.15	19.50
Wheeler County	42	702	235	33.48	5.59
Potter County	1	7	2	28.57	2.00
Total	1,952	124,519	39,913	32.05	20.45
West Texas—					
Yates	400	5,510,934	89,500	1.62	223.75
Crane-Upton	593	47,580	23,129	48.61	39.00
Howard-Glasscock Dist.	534	73,000	25,964	35.57	48.62
Ector County	79	25,998	8,091	31.12	102.42
Winkler County	534	113,615	60,000	52.81	112.36
Southwest Texas—					
Darst Creek	248	167,279	29,979	17.92	120.88
Salt Flat	333	(a)19,153	15,333	80.00	46.04
Pettus Townsite	19	(b) 7,938	4,500	56.68	236.84
Central East Texas—					
Van	187	(c)371,450	27,437	7.39	146.72
New Mexico—					
Hobbs	134	1,081,878	31,475	2.91	234.89

(a)—Nov. 4, 1930, to February 2, 1931, Schedule.
(b)—Gauged Dec. 1, 1930.
(c)—Potential via 11/16-inch choke.

Rush Deep Production Search In North and Central Texas

WICHITA FALLS, Texas.—Search for deep production in the North and Central West Texas is being pushed with renewed efforts while a lull prevails in development work in established fields and wildcat areas because of market conditions. More than half a dozen counties are now receiving deep tests that promise to establish new record depths for each during the early part of 1931. Deep Oil Development Company, which was organized in September, 1929, by operators and business men of Wichita Falls and other North Texas cities, with a capital stock of $1,000,000, has three deep tests under way, and has made locations for two additional tests.

Deep Oil Development Company's first try for deep production was undertaken middle July, 1930, when drilling commenced on Hirschi 1, located 300 feet west and 841 feet north of the southeast corner of the south 164-acre part

of the north 238-acres of Section 834, David Cowan Survey, northern Wichita County. This test is drilling with cable tools below 4230 feet, and established a local record in carrying a 15-inch hole to 3200 feet. A string of 11¾-inch pipe was cemented at 3163 feet after drilling this large hole with rotary. The same company's Munger 1, located 330 feet out of the northwest corner of Block 30, Kemp-Wichita Valley Farm Land Survey, is testing out the southern portion of Wichita County, and at last reports was drilling below 3580 feet. Drilling commenced on the third deep test during the past week and the first of a pair proposed for Archer County on the L. F. Wilson ranch. The latter is located 7500 feet west and 2200 feet north of the southeast corner of Section 120, A. T. N. C. Lands, and is known as Wilson 1-A. A location for a 5500-foot test has been staked 330 feet out of the southwest corner of Section 76, same survey, and about 2½ miles to the northeast of the latter.

The New Castle area in Young County has also been included in the Deep Oil Development Company's program, and location has been made for Mrs. A. E. Logan 1, located 150 feet out of the Sec NW¼ Section 9, T. E. & L. Survey. Ample stock has been subscribed to assure the drilling of these tests. N. H. Martin is president of the company and Frank Kell is chairman of the board of directors. Harry Hines is vice president and general manager. All drilling work is being performed by contractors.

Swenson Oil & Gas Company is shooting at a depth record for North Texas in the drilling of its wildcat on the Swenson Land & Cattle Company ranch in Throckmorton County. This test was under reaming 5 3/16-inch pipe at 5913 feet, with a total depth of 5964 feet at last reports, but may be abandoned near the 6000-foot level, and the rig skidded for a second deep test in the general area. Bert Wisely is directing operations on this wildcat. In western Jack County, Magnolia Petroleum Company's G. M. Kinder 1 is approaching depth records in the area with drilling under way in gray lime formation below 5185 feet. Crump-Conklin and Watchorn Oil & Gas Company's Williams Bros. 1, Jack County, was carried to 5635 feet in December, 1927. Standard rig is to be used by Darby Oil Company, Merry Bros. & Perini in the drilling of a proposed 5000-foot wildcat test in Cottle County, having made location on the Maude Richards land, being 330 feet out of the northeast corner of Section 13, B. S. & F. Ry. Survey.

Efforts for deep production in northern Eastland County have been waged for more than a year by S. A. Hopkins, Cisco operator, and associates, on the Davis land, Section 54, Block 4, H&TC Ry. Survey. This test cemented a string of 5 3/16-inch pipe at 5420 feet, with a total depth of 5565 feet, early in December. Drilling of plugs revealed a water horizon below the casing seat.

Taylor County, located on the west flank of the so-called Central West Texas district, has received a 6251-foot test by J. B. Jameson et al on the Webb tract, Section 46, Lunatic Asylum Lands. This test recently cemented a string of three-inch casing at the bottom, but failed to hold, so preparations are being made to re-cement the pipe. The original contract called for a 3300-foot test.

Moss Bluff Test Abandoned

Houston.—Humble Oil & Refining Company failed to establish production on the northeast flank of Moss Bluff dome, Liberty County, through drilling of Hylton 1 in the B. M. Spinks Survey. It was abandoned in shale at 6598 feet. Its location is approximately two miles northwest of the established production on the southeast flank of the dome.

Renew Plea for Increased Runs From Van; Rusk County Oil Moving

Fort Worth, Texas.—Renewed attempts to have an increased production allowance authorized for the Van field by the Texas Railroad Commission will be made promptly by operators. A sliding scale increase was sought effective December 15, 1930, but the petition for the increase was withdrawn on the eve of a formal hearing before the commission scheduled for December 10. Operators then asked that production be boosted from 27,500 to 35,000, then on a graduated increase to 50,000 barrels after February 15. Humble Pipe Line Company completed a 10-inch carrier from the field to the Louisiana border December 13 in anticipation of a greater production allowance being assigned the field, but is now only handling a small volume of oil daily that represents surplus demand of Pure Van Pipe Line Company. Threat of a flood of high gravity oil originating from the recently discovered Joiner and Bateman areas in Rusk County may offset the production restrictions adhered to during the past year by Van operators. The latter have purposely passed up a larger market outlet in order to contribute to a nation-wide production curtailment program, while Rusk County operators offer little encouragement of sharing in such a movement until all possible market outlets have been exhausted at cut rate crude price offers.

First movement of Rusk County oil to Louisiana refiners on contract began January 5, and the price represents a sharp cut below Mid-Continent posted schedules for such grade of crude.

Intimation that a major pipe line connection may be made available for Rusk County operators was given in a recent statement issued by R. R. Penn, chairman of the Central Proration Committee of Texas, when Rusk operators give some assurance that development work will be held to a reasonable level. Systematic proration of production in Rusk County is considered to be impossible with individual operators and brokers having the only transportation facilities, as is now the case, while one or more major company lines could be used as the backbone for a proration plan. It is quite probable that Humble Pipe Line Company will have the first line into Rusk County to serve outside connections on an equal basis, as this company can tap the two fields with about a 15-mile extension from its Van system. This line will have available room for a reasonable volume of Rusk County crude even though the proposed production increase at Van materializes.

Texas Independents to Oppose Additional Oil Laws

Fort Worth.—More effort will be spent by the Independent Petroleum Association of Texas in opposing proposed legislation pertaining to the oil industry than in sponsoring new laws when the Texas legislature convenes shortly, according to a program outlined during a special meeting of the board of directors held here January 5. The association will put up a fight against proposed laws that are alleged to be unfavorable to independent operators. The directors selected Fort Worth as the site for the second annual meeting of the organization to be held March 2.

Tom E. Cranfill, president, presided at the meeting, and nominated representatives of the association at the request of Governor Moody to be included in the committee of 25 Texas oil men to attend an oil conference at Washington January 15.

EAST CENTRAL TEXAS FIELDS

Many Operators Are Attracted To Rusk County Oil Area

TYLER, Texas.—Rusk County's two recently discovered prolific high gravity oil areas are attracting operators and companies from all sections of the Mid-Continent. These tardy invaders are making investments in high priced leases and drilling sites with intentions of wading into an active development program for a quick turnover. Older lease owners are likewise doing their part toward launching an aggressive campaign in the Joiner field, where more than a score of operations have started, although only about half this number are actually drilling. Movement of crude from the Joiner area to Louisiana refining centers began January 5, and from this date on Rusk County can be counted upon to become a growing factor in crude market circles.

Prospective buyers of the wildcat producer of Ed. W. Bateman et al on the L. D. Crim 628-acre farm, where production was obtained from Woodbine sand at 3640-50 feet on December 28, rated at 900 barrels of 38.3 gravity oil per hour, are increasing in numbers as the owners of the well and 1400-acre drilling block compile bids already submitted by various major companies. This property is the most sought after of any in the Southwest, and bonafide offers have been submitted by responsible companies for more than $1,000,000. The Crim well is located 10 miles north of the biggest producer in the Joiner field, with no definite information available as to whether it is an extension well, or the beginning of a separate field. The initial and only gauge taken of production from the Crim well was for a period of about 40 minutes. The well has been shut in since completion, and will likely be sold without further testing. Reliable estimates on the gas flow accompanying the oil rated the volume at 5,000,000 cubic feet daily.

The geographic location of the Crim well offers an attractive setup for a number of major companies, while the production possibilities of the area are rated high, as is usually the case with Woodbine sand formation involved in Texas. This particular formation holds a record of scoring a net profit on virtually all developed leases in the eight separate fields, comprising the Woodbine sand group in Central East Texas, with the Van field the latest striking example of productiveness. Prospects of obtaining an almost solid block of 1400 acres around a heavy producer in the Woodbine is a distinct advantage for the owners of the Crim producer. The property fits into the picture of Humble Oil & Refining Company, which is a prospective purchaser, because the company has recently completed a 10-inch carrier from Van field to the Texas-Louisiana border to supply the 100,000-barrel refinery of Standard Oil Company of Louisiana at Baton Rouge. Both of the latter concerns are subsidiaries of Standard Oil Company of New Jersey. Less than 10 miles of new line would be required to connect with the well.

Gulf Production Company has also taken its turn at buying the Crim property, as Gulf Pipe Line Company's Oklahoma-Texas trunk line lies only a short distance to the west, while this line can be utilized for pumping north and south at same time, with a few changes in station equipment. The line is already altered to make shipments north from Saltillo station to the Middle West and East, and in the future will make dual shipments from North, Central Texas and West Texas, Panhandle and New Mexico fields. Shell Petroleum Corporation has also been identified with the prospective purchasers, as this company is desirous of locating an adequate crude supply to justify a refinery in the Dallas-Fort Worth trade territory.

Lease Price Levels High

Lease prices, ranging around the $1000 to $1500 level, have figured in late trades made in the Bateman and Joiner areas, and some small drilling sites have commanded an even higher acreage price. Invasion of the two areas by successful independents from the Wichita Falls district, where active plays have been routine work in previous years, promises to speed up development activity, as these operators are going in for a quick turnover. Oklahoma, Louisiana and Arkansas operators and companies are also becoming well represented with lease protection. Rotary contractors are also alert to the possibilities of putting idle rigs to work, and are lining up contracts at $2.50 per foot, while some are offering to drill and complete wells on a turnkey basis at prices ranging from $22,500 to $27,500. Supply houses are sparring for sites also.

Brief gauge given Frank Foster-Deep Rock Oil Company et al's C. D. Ashby 1, which widened the Joiner area more than a mile to the west on December 13 with an estimated potential of 3000 barrels daily from sand at 3597-3616 feet, revealed a much higher rating last week. This well is credited with having flowed 407 barrels 40 gravity oil per hour, although it has been shut in for about 10 days. The owners of this well have contracted to sell from 3500 to 5000 barrels daily during the next 30 days to the Shreveport plant of Louisiana Oil Refining Corporation (Henry L. Doherty interests). First shipments began from accumulated storage on the lease January 5, with Inland Waterways Pipe Line Company loading the oil aboard tank cars. This crude sale will not net the well owners Mid-Continent prices. Inland Waterways Pipe Line Company is owned by W. A. Moncrief, F. Kirk Johnson and associates of Fort Worth, and has a 3⅛-mile four-inch line that extends from the above well to a 10-car rack on the Missouri Pacific Railroad, which has a tariff of 10 cents per 100 pounds on crude moving to Shreveport. Work began January 5 in increasing the capacity of the rack to 15 cars, according to Moncrief, in anticipation of handling crude for other producers in the Joiner field. Two bolted 5000-barrel steel tanks have been erected at the rack.

Sixth Well for Joiner Field About Completed

Tyler, Texas.—A sixth producer for the Joiner field was in process of completion early this week when Tex Lloyd and others' Camp 1, located on a five-acre lease and northwest of the discovery well, cored oil saturated sand at 3541-52 feet, with considerable gas in evidence.

The Sun Oil Company has abandoned its Oscar McGehee wildcat test on the Noonday block in Smith County after coring Pecan chalk at 3760-3842 feet, and is moving this rotary outfit to drill a Woodbine sand test in northwestern Leon County, and about 4½ miles northwest of the town of Marquez. Location has been made 1200 feet northeast of the southwest line and 450 feet southeast of the northwest line of the Mrs. Ella Grayson 229.32-acre farm, Section 36, Maria de la Concepcion Survey. Sun Oil Company has a large block of leases centering around this location, with possibilities of an inland salt dome.

Wildcatting Active in East Texas

Shreveport.—A wildcat test to be drilled to 4500 feet with stipulation that another similar test is to be drilled in the event of failure of the first, was spudded in Panola County, East Texas, during the week ending January 3. The new drilling operation is Daisy Oil and Gas Company's Rucks Heirs 1, John Palmer Survey, which late last week was drilling at 150 feet. The test is on a block of 1000 acres located near the town of DeBerry.

According to reports reaching here Cranfield and Reynolds have blocked 10,000 acres of wildcat leases in Harrison County centering in the John V. Morton and Joseph Basch Surveys. Shell Petroleum Company and Vacuum Oil Company are also reported buying some wildcat acreage in the same general locality.

After being unable to get casing on bottom due to a crooked hole, Trammell and associates have cemented 8¼-inch casing at 1514 feet and are reaming to bottom below the casing in Hussey 1, Charles Lockhart Survey, elevation 282 feet, a wildcat test in Marion County, East Texas. Total depth is 1887 feet and a show of oil in hard chalk was claimed at 1822-84 feet.

Knott and associates are waiting orders at total depth of 2988 feet in lime in Marion Durham 1, a wildcat in Charles Haley Survey, Panola County, after testing 50,000 cubic feet of gas after setting a short string of 5-3/16-inch casing 11 feet off bottom. The hole is now full of salt water.

East Texans Want Development

Shreveport.—A movement to oppose proration for newly opened oil fields in East Texas was launched January 1 by the Marion County chamber of commerce at Jefferson. A resolution asking that proration committees keep a "hands-off policy" said the request was made "in view of the fact that this section is just entering upon the possibilities of the largest oil field in the state." It was asked that the commission keep off proration until the area was proven.

Oklahoma City Fire Extinguished With Slight Loss of Property

Oklahoma City.—Fire which threatened the north end of the Oklahoma City pool broke out Monday afternoon, January 5, when the walls of a slush pit gave way permitting waste oil to become ignited when it flowed under boilers on Plains Petroleum Company's Sadler lease. Flames spread to T. B. Slick's Rodman 1 destroying the derrick floor at that location and melting Phillips Petroleum Company's gas line which runs near the well. Within one hour and 30 minutes the Oklahoma City fire department had extinguished all flames by using foam throwing lines restricting loss to derrick floors of two wells and minor damages to gas line.

Favorable wind direction probably averted ignition of 150,000 barrels of crude in nearby storage which no doubt would have resulted in disaster for a large part of the field in the north end.

Nitro Kills Three

Electra, Texas.—Three employes of the U. S. Torpedo Company's mixing plant, located about three miles north of Electra, were killed December 30 while engaged in mixing explosives for shooting of wells. The victims included: J. B. Russell, 44; J. W. (Bill) Kenworthy, 30, and J. B. Snyder, 22.

NEW MEXICO NOTES

Hobbs Proration Extended Six Months From January 10

HOBBS, New Mexico.—Extension of proration enforcement in the Hobbs field for six months after the current plan expires January 10 has been sanctioned by newly elected officials of New Mexico. Hobbs operators had previously signed the agreement, with two concerns reserving right to withdraw should they so desire.

A large committee of operators met with state officials at Santa Fe, January 5, in connection with the proration program. While opposition to proration was registered at the meeting by representatives of a group of outside interests at Hobbs that desire to throw the field wide open to stimulate local business.

Having failed to register a single completion during the last half of December, the Hobbs field is assured of a number of new wells during the fore part of January. Tidal Oil Company's Grimes 5 flowed through tubing January 4 at the rate of 7517 barrels daily at 4200 feet, but will not be given open flow test until next week. Landreth et al's State 1, located on the southwest edge of the field, is testing at 4196 to 4220 feet, with prospects of making a small producer.

Production in the Eunice field, Lea County, is slated to register a gain as result of Continental Oil Company and The California Company's Meyer 1 being provided with an outlet for 1500 barrels daily. This well has been pinched to about 600 barrels daily. The oil is to be taken by Pasotex Petroleum Company for use at its El Paso refinery. Tidal Oil Company's Coleman 1 is flowing about 700 barrels daily, while Getty Oil Company's State 1 is flowing about 950 barrels daily. Both of the latter have been shot, and the oil is consigned to Tidal Refining Company. Shell Petroleum Corporation's Coleman 1 showed only a small amount of oil when tested at 3990 feet, but has been deepened to 4005 feet, where a new test will be made.

Four Wildcat Tests Planned for New Mexico

Roswell, New Mexico.—New wildcats announced for New Mexico include one to be drilled by Thomas et al in Hidalgo County, not far from the Arizona line, near the old "Lordsburg well" drilled some months ago and abandoned with total depth 1600 feet. In McKinley County United Kern Petroleum, Inc., of Long Beach, California, will drill a test on Section 1-18n-11w, and the Oscar Fry interests will drill on a location in the same township range. In Curry County, Williams et al will drill a test to the Pennsylvanian series on Belleview structure.

New Gas Company Formed

Great Falls, Mont.—A new gas company with the largest gas reserves in Montana has been formed by the merger of Capital Gas Corporation, Monarch Gas Corporation, Coulter Gas Corporation, and Jones Oil Company. The new company's completed wells have an open flow capacity of more than 200,000,000 cubic feet per day on various structures in northern and eastern Montana. Gas reserves are estimated at 500,000,000,000 cubic feet.

Gulf Coast and South Texas Fields

JACK LOGAN, *Staff Representative, Houston, Texas*

Big Lake Adds Eighth Deep Well to The North

San Angelo, Texas.—Record depth production found in the Big Lake field was extended about one-half mile to the north when Big Lake Oil Company's University 5-C was brought in under perfect control at 4 a. m. December 30 with promise of becoming one of the best deep wells in the field. This well was carried to 8718 feet before rotary drilling mud was lightened to permit it to clean itself. It gauged 718 barrels of 53.7 gravity oil and 17,603,000 cubic feet of gas during the first 24-hour gauge, then steadily increased in oil and gas yield, as is usually the case with new completions in the deep zone. On the sixth day, ending 7 a. m. January 5, the production had increased to 1275 barrels oil and 24,067,000 cubic feet of gas, with 185 pounds back pressure applied. This oil tests 48 degrees in temperature, and similar to that produced by the other seven deep wells in the field. All formations below the first evidence of deep production encountered at 8160-65 feet were cored.

Croup One Oil Corporation's University 4-B is the next completion slated for the deep horizon, and early this week the rotary crew was coring broken lime formation at 8140 feet. The remainder of the hole will be cored then drilled with large bit. This test was spudded September 1, and promises a completion in record time for the field. The above new producer on the Big Lake Oil Company's leasehold was spudded June 8, and completed in six months and 23 days.

Big Lake Oil Company has successfully removed 276 joints of tubing from University 2-C, and the hole may be deepened from its present depth of 8603 feet before tubing is replaced. This well began flowing through tubing November 24, and averaged 2100 barrels oil and about 20,000,000 cubic feet of gas daily under heavy back pressure, but the tubing became plugged within 20 days. In the meantime production is coming through casing. Group One Oil Corporation's University 2-B continues off production due to loss of drill stem in hole. The latter was killed at 8489 feet to deepen and install tubing. The seven deep producers on the active list in the field produced 13,108 barrels oil and 118,420,000 cubic feet gas on 24-hour gauge ending 7 a. m. January 5.

Lost Lake Extended Slightly Southward

Houston. — Pure Oil Company extended production slightly southward the past week at Lost Lake dome, Chambers County, through completion of Mayes 12 as a flowing well from 2375-2393 feet after setting one joint of screen. It began flowing 480 barrels daily, registering 540 pounds pressure.

This well is 300 feet south from Mayes 5 and Mayes 9, formerly the most southerly producing wells in the field. Aside from the new well the Pure Oil Company, sole operator at Lost Lake, has seven other producing oil wells, all on the pump, with combined daily production of about 350 barrels. Producing wells, all on the Mayes land, include Numbers 2, 3, 5, 7, 9, 10, and 11.

The field is located only a short distance from the mouth of Trinity River, and production is moved in barges through Galveston Bay and on to the company's refinery and shipping center at Smiths Bluff on the Port Arthur-Beaumont ship channel.

An interesting test in the Lost Lake operations of Pure Oil Company is Lost Lake 5, which is located toward the southwest edge of the dome in Lost Lake, and in which efforts will be made to drill through cap rock. The cap rock has never been penetrated on this dome, although one well drilled in it nearly 800 feet without reaching salt. Aside from the hope of going through the cap rock it is considered possible that Lost Lake 5 might reveal "coning" or "mushrooming" such as exists around the edges of the nearby Barbers Hill dome. Lost Lake 5 encountered the top of cap rock at 5136 feet and has present total depth of 5847 feet. At the latter depth a cavity was struck and early this week cement was being pumped into the cavity.

Duval County Wildcat Test Drilling Ahead

Houston.—Vacuum Oil Company's Duval County Ranch Company 1-A, wildcat located in Section 280, northwestern Duval County, recently filled four joints with drilling mud carrying a slight show of gas when a drill stem test was made at 1703-1723 feet. The sand was then passed up, however, and late last week the well was drilling at 2012 feet.

This test is along the same fault trend as the wildcat producer recently completed in Section 293, about five miles to the northeast, by S. R. C. Oil Company and Vacuum Oil Company. However, the drilling wildcat is believed to be on a separate fault from that on which the producer is located. Late last week the producer, Duval County Ranch Company 1, was producing 185 barrels net oil daily along with 28 per cent water. The well is connected by means of an eight-mile four-inch pipe line to Magnolia Pipe Line Company's carrier running through the Schoolfield-O'Byrne pool.

The Texas Company recently abandoned a test 625 feet east of the wildcat producer after testing salt water in the expected oil horizon, while S. R. C. Oil Company and Vacuum Oil Company's No. 2, located 575 feet west and 600 feet south of No. 1, was drilled into the fault and missed the oil sand.

Guerrero Dome, Mexico, Test Drilling At 7385 Feet

Laredo, Texas.—Compania Petrolera Tamaulipas was drilling late last week at 7385 feet in hard sandy shale (probably still in Midway formation) in its Guerrero dome deep test, Guerrero 3, in northern Tamaulipas, Mexico.

This well, discussed in detail in THE OIL WEEKLY January 2, 1931, pages 32, 33, 34, 87, 88, is the deepest test ever drilled in Mexico. Casing in the hole includes 15½-inch set at 449 feet, and 10-inch at 3404 feet—the last string set. The test started drilling in Wilcox formation July 15, 1929, and went into Midway at 2287 feet. It is located on the south part of the Guerrero anticline, about 18 miles south of Zapata, Texas.

Hearing on Refugio Gas Waste Set For January 8

Houston.—Notice of a hearing on prevention of natural gas waste in the Refugio field was given at a meeting held in Austin Monday, December 29. The hearing will be held in San Antonio, January 8. An effort will be made to have all operators in the field present at the meeting.

Completion of two oil producers increased potential production of the field 400 barrels the past week. Luling Oil & Gas Company completed its City 1, located in approximately the center of Lot 16, Block 4, south of Saxet Oil Company's Kay lease in Block 6, for initial production of 200 barrels of 23 gravity oil. Production is from sand at 3680-92 feet with 12 feet of screen set on bottom. Gas lift is now being used to produce the well. Moody-Seagraves Producing Company's Carlisle 1, a work-over, is producing 200 barrels of gasoline per day through ¼-inch choke with 2100 pounds pressure. This test, located in the center of block 2, is producing 22 feet of sand at total depth of 6466 feet.

Union Producing Company's Rannie Heard 11 set 14 feet of screen at total depth of 3743 feet to complete as a gas producer with a flow of approximately 30,000,000 feet. The well is flowing under 500 pounds casing pressure and 1000 pounds tubing pressure. Houston Oil Company's O'Connor 1, located 5500 feet southeast of Union Producing Company's M. F. Lambert 1, is preparing to drill the plug at 5913 feet with the possibilities that production will be developed after this operation is completed. Drill stem test taken before the casing was cemented at this depth showed seven joints of oil.

Bienville Parish Test

Shreveport.—S. P. Borden and associates are drilling hard lime at 4850 feet in a deep test in Bienville Parish, in a wildcat area. Cagle Brothers' Lawhon 1 in Section 15-16-8W of the same parish cored sandy lime late last week from 2205 to 2216 feet and are probably nearing the Nacatosh. National Drilling Company drilling a wildcat in Catahoula Parish, east central Louisiana tested salt water and have shut down at 3086 feet in Marsh McMillian 1, Section 26-9-6E.

Several Tests Planned for Caddo Parish

Shreveport.—R. E. Davidson and D. M. Perkins are blocking a 4000-acre tract centering in Section 22-16-13, Caddo Parish, for a 5000-foot test which is planned to be started by April 1. Davidson and Askew plan a 2500-foot test to be started before February 1 on a 1200-acre block they are assembling with Section 33-17-13, Caddo Parish, as a center. This test will be in the vicinity of the old Cedar Grove gas area which gave some promise back in 1917. I tis planned to make a thorough test of both the Nacatosh and Blossom horizons.

Port Aransas Ships 13 Cargoes of Oil

Aransas Pass, Texas.—Thirteen ships carrying cargoes of crude from South and West Texas embarked from the oil terminals in Port Aransas during the period of December 19 to December 23, inclusive. They carried a total of 636,366.26 barrels of crude to various ports of the world.

The shipments included three departures from the Aransas Harbor Corporation's docks, terminal for Gulf Coast Pipe Line Company. The crude, totaling 166,697.92 barrels, was from both Pettus and Refugio. There has been a total of 7,783,427 barrels of oil loaded from this dock since its beginning in August, 1929.

Humble Pipe Line Company's docks at Port Aransas reported 10 sailings during the period, carrying 469,668.34 barrels of crude. A portion of this oil was from the Refugio and Pettus pools, while the major part was from the West Texas Permian district. Since the beginning of the company's loading docks at this port on September 1, 1928, a total of 59,277,067.27 barrels of crude have been exported.

There were no sailings from Humble Oil and Refining Company's docks at Port Ingleside during the week. The total shipments from November, 1926, to date total 26,603,169.90 barrels. A portion of this oil is refined, this company maintaining a large plant at Port Ingleside.

Hankamer Field Extended Slightly Northward

Houston.—Gulf Production Company extended production slightly northward at Hankamer field, Liberty County, the past week when it completed Boyt 10, located 500 feet north of No. 4 producer, as a flowing well after setting a joint of screen at 3945 feet. It began flowing 1400 barrels fluid, 35 per cent b. s. and water (910 barrels net oil) daily through a one-half inch choke. Gulf Production Company is sole operator in this field, holding leases covering most of the promising area, and with wells pinched in partially, has total production of about 2200 barrels daily in the field.

East Hackberry Adds Producer

Houston.—Another oil producer was added in the new shallow area on the southeast flank of East Hackberry dome, Cameron Parish, Louisiana, the past week when Yount-Lee Oil Company completed Kelso Bayou 40 in Section 13-12s-10w. With one joint of screen set at 2910 feet, the well came in flowing 100 barrels 22 gravity pipe line oil daily through a one-half inch choke, and registering pressure of 200 pounds.

Preparing Pumping Test of Kerr County Well

Houston.—Evans & Gant late last week were preparing to make a pumping test on their promising wildcat, Jeff Love 1, in western Kerr County, 40 miles west of Kerrville.

Depth of the well is corrected to 3391 feet. Casing has been lowered to 3368 feet. The well swabbed 100 barrels fluid after standing, yielding salty water estimated at 30 per cent of the fluid.

Abandons Cedar Bayou Test

Houston.—Sloane Prospecting Company has abandoned its third test, Wosoba 1, on the Cedar Bayou geophysical prospect, eastern Harris County, about five miles west of Barbers Hill dome. Final depth was 5550 feet with shale as the last formation encountered. There had been a slight showing of gas in sandy shale at 4400 feet. Location of this test was 165 feet from the east line and 450 feet from the south line of the south half of the Hannah Nash Survey. A short distance to the northwest was the location of Ulrich 1, first test of the prospect, which had several oil and gas showings between 4400 and 5000 feet and a slight oil show at 5950 feet before being abandoned at 6200 feet in the spring of 1930. The second test, Davis 1, was located 2100 feet northwest of Ulrich 1, and it had a showing of oil around 4000 feet but was finally abandoned at 6400 feet.

Second Test Started in Eastern Young County

Wichita Falls, Texas.—Panhandle Refining Company is starting a second test near its successful wildcat completion early in December on the Mary Cox land in eastern Young County, while in the meantime production from the discovery well has materially increased as result of deepening of the hole on several separate occasions recently. Cox 1 blew in making 11,000,000 feet gas and a spray of oil at 2329-34 feet, and when deepened to 2336 feet increased the oil production to 120 barrels daily. The production jumped to 10 barrels per hour and 15,500,000 feet gas when the hole was deepened to 2341 feet. A pipe line connection has been obtained to sell a portion of the gas, but no relief is in sight for the oil output. The second location is starting up on the W. E. Steele (Martin) 100-acre tract, about 1500 feet southwest of the producer. Both are located in Section 1, Indianola Ry. Survey.

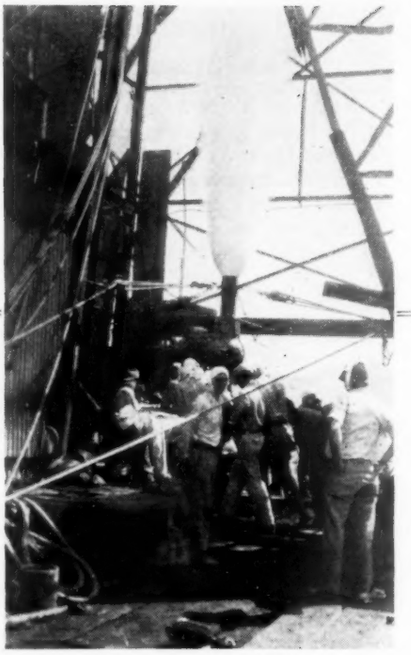
The shallow oil pools in the New Castle district, located in North Young County, are supplying the bulk of the new production credited to the North Texas district. Recent completions in this region includes Bullington and King Royalty Company's Graham 9, which produced 865 barrels initial at 685-710 feet, while E. D. Willis et al's Kirkland 2, located on a 3.7-acre strip lease in the west one-half of Section 2249, made 715 barrels initial from sand at 696-713 feet.

Ranger, Texas.—Northwestern Comanche County has a new oil area through the wildcat efforts of Frank Kirk, Gorman operator, who recently drilled into sandy-lime formation at 2568-93 feet on his R. T. Haile 1 with assurance of a small producer. This test was deepened to 2808 feet, and then shot with 80 quarts, with promise of making a 100-barrel producer. It is located in the northwest part of the northeast 160 acres of Section 210, John Talbot Survey, and on a direct line between the towns of Duster and Sipe Springs. The nearest production lies about three miles to the northwest. Kirk acquired the drilling site in fee prior to starting the test.

Ventura, Calif.—Prairie Oil and Gas Company is coring at 8065 feet in Sexton 1, a test near the Ventura Avenue field, with the formation showing a sandy shale and harder sandstone. A string of nine-inch casing was cemented at 7327 feet but no production tests have been made. This is one of the deepest wildcats ever drilled in Ventura County.

Great Falls, Mont.—The Reserve structure in the Sweetgrass Hills was proved for gas last week when Western Natural Gas Company drilled into a production of 10,000,000 feet per day. The structure is the largest of the folds north of the Sweetgrass Hills, and is reported to embrace about 10,000 acres.

Los Angeles.—Pipe lines and connections have been completed which make it possible to send natural gas from Kettleman Hills to Los Angeles or San Francisco from one common center of supply. This is the equivalent of a 425-mile line and serves nearly half of the people of California.



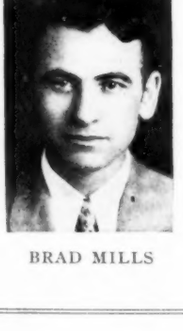
A Kettleman Hills Gasser running wild

"Biggest in the world" or the "first of its kind" are common expressions used in describing developments in the Kettleman Hills, field — California's most interesting and important oil field.

Few have been able to visualize the billion barrel potential production credited to Kettleman Hills. A still fewer number are familiar with the geology, operating difficulties and engineering problems connected with drilling and producing wells from a depth below 7000 feet with corresponding unusual pressures.

In next week's issue, Brad Mills, staff writer for THE OIL WEEKLY in California, will present the complete story of Kettleman Hills giving particular attention to the geology and engineering problems of this all-important field.

You will want this article for your reference files. Be sure and watch for it next week—January 16.



BRAD MILLS

News From California Fields

BRAD MILLS, ***Staff Representative, Los Angeles, California***

Playa del Rey Appears to Have Passed Its Peak

LOS ANGELES.—Despite an exceptional completion and continuation of the rush to finish wells ahead of the natural decline which is bound to come, Playa del Rey lost ground during the week and now seems to have definitely passed the peak period of three weeks ago. An occasional favorable development here and there serves to renew the spark of optimism among operators who have not yet obtained production, but at the very best the field is in a townlot district and destined to go the route all townlot fields have gone. This does not mean that the field has not given a good account of itself nor that production will drop suddenly from the present level, but the nature of development has led to a producing setup which portends a much lower weekly average. Production has begun to fluctuate sharply, in contarst to a steady flow during the climb from 25,000 barrels to a peak of 45,000 barrels.

The large number of completions during November and December reduced the total of active drilling projects considerably, but even the smaller number of new locations failed to bring the number of active drilling wells down to the expected figure. The field has shown an uncanny ability to exceed average estimates in almost every phase of development, although it has fallen short of major ranking. Active tests total about 100, with the percentage of idle wells showing a gradual increase.

Ohio Oil Company, discoverer of the field and one of the largest operators, completed Gun Club 4 in the top of the deep zone at 5515 feet with an initial production of 2600 barrels. This was one of the best completions ever recorded in the field but should not be confused with the average townlot completion in the shallow zone. The well is an indirect offset to the discovery well, which was completed a year ago with almost exactly the same initial flow from 6200 feet. The deep zone has looked best in this part of the field, a greater penetration being possible on the flanks than on top of the structure. The 8⅝-inch shut off was made at 5445 feet, giving the well only 60 feet of sand and shale from which to produce.

A study of the week's completions reveals the reasons for a smaller production. The average initial flow reported was on a par with previous weeks, but a gauge of the individual wells three days after completion showed a much smaller flow than reported. This was largely brought about by estimates based on the first hour's performance or very short tests. The decline in townlot wells has become greater in new completions than during the early stage of development, even though the initial has not varied much. This may be accounted for by reason of the low gas pressure originally developed by the shallow zone. The action of each well is more of a local affair within the immediate locality tapped than would be the case where very high gas pressures prevail. The same factors are at work, however, and while the initial production of a completion late in the period of development may be satisfactory, the immediate decline is greater than in the original producers.

The shallow zone continues the favorite and most of the drilling wells will be completed in this sand. Deep completions have averaged little more than the shallower wells, yet have been finished at practically twice the expense. An occasional deep producer serves as a temptation but the conservative and inexperienced operator wants production quickly and inexpensively.

Deep Production Still Sought at Huntington Beach

Huntington Beach, Calif.—Not satisfied with Superior Oil Company's recent production test in Fee 1, which failed to produce from a depth of 7438 feet, other efforts will be made to obtain deep production in the Huntington Beach field. The east slope of the field will receive attention again, although nearly a dozen wells have been drilled in this section. Superior Oil Company has leased more than 100 acres on the mesa and may drill two wells on the tract in an effort to develop deep production. The Company's Fee 1 was recently tested but could not be bailed below 1500 feet. The flow string was pulled and the well shut down. Further attempts will be made to effect a water shutoff. Streaks of oil sand cut below the 6⅝-inch shutoff at 7000 feet indicated that at least a small commercial producer might be completed, but water difficulties entered to spoil the test.

California Production Dips to 535,000 Barrels

LOS ANGELES.—Production in California touched 535,000 barrels during two days of the past week and probably will hover around this figure for some time. The average output for the week was higher than the minimum attained at the end of the period, but was sharply below that of the previous week. The size of the drop, following reduction of the base allowable to 500,000 barrels, has exceeded the expectations of the average observer and if an average output can be held to 540,000 barrels the former allowable, the purpose of the lower allotment will have been partially at least, achieved. Placing of allowable at 500,000 barrels was a final effort toward stabilization on which could not be achieved under the higher allotment.

Fields under the supervision of H. P. Grimm were producing 326,000 barrels at the end of the week, while those under the direction of Neal Anderson were producing 209,000 barrels. This was a net overage of only 35,000 barrels, as against a former excess of 60,000 barrels. The new allotment has at least cancelled the excesses under the former schedule, although it is not to be construed that the chief purpose of the lower allowable was to chisel off any output that might be found vulnerable to a lower allotment.

Such factors as the posting of a regular price schedule, proration of pipe line runs, purchase contracts which were

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let several weeks ago, and demands from certain refiners that their supply of crude be maintained are complicating the curtailment program in the Playa del Rey field. The mere fact that it is a townlot field makes it easy to appreciate the problems ahead of conservation. A great fleet of trucks is transporting much of the oil from the field, and this means of removal has influenced the crude market considerably. It was thought that the proper pipe line control might lead more quickly to curtailment, but the natural result of proration of runs from the field was the development of other outlets. Trucks have been used from the beginning and have played an important part in field development.

The state is asking for a rather stringent injunction against Kettleman Hills operators and a favorable decision from the Superior Court at Hanford might hold production in check here without the unit plan of operation. The state has made certain admissions regarding the danger of shutting in some of the present producers, but wants the wells shut in as soon as pressures will allow such a step. A certain tolerance, within which gas may be blown to the air without constituting an unreasonable waste, will be granted, while a production of more than 15,000 cubic feet of gas to a barrel of oil will be prohibited, if the plea of the state for an injunction is recognized by the court.

South Slope at Long Beach Still Holds Interest

Long Beach, Calif.—The south slope area at Long Beach continues to hold the center of interest in California's most productive field, and the fact that the best wells are being finished at unusually shallow depths has led to increased activity in a long-neglected sector. Completion of several good wells between 5000 feet and 5300 feet indicates that the intermediate zone has been drained less than either the shallower or deeper sands. Poor water shutoffs several years ago in wells completed a considerable distance from present activity was expected to be reflected in a high percentage of water, but such a development has not appeared. M. and A. Oil Company recently completed Painted Hills 2 with an initial production of 1200 barrels at 5660 feet, but the well is flowing only from the top of the sand. A cement bridge was placed at 5400 feet and tubing run to 5065 feet. This intermediate zone holds considerable promise. The field still has more than 100 active drilling projects and the decline in field work will necessarily be slow.

Coal Oil Point Well May Open New Ocean Field

Santa Barbara, Calif.—Bolsa Chica Oil Corporation has cored nearly 100 feet of solid oil sand below 4070 feet in Augur Permit 191-1, a wildcat test off Coal Oil Point, and apparently stands better than an even chance of opening up a new field under the Pacific Ocean.

The well is located several hundred feet outside the mean high tide line and is being groomed as the first test ever to usher in a new field lying entirely under the ocean. The Vaqueros zone was found at 4020 feet and a string of nine-inch casing run for a prospective production test. The sand between 4020 feet and 4070 feet carried gas and traces of oil, but cores taken from below the top of the real oil sand showed cuts as heavy as those found in proven fields. In anticipation of a large producer, a long flow line has been

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laid to connect the well with storage tanks on the mainland.

The Coal Oil Point structure roughly parallels the Elwood field and is less than three miles from this producing district. It is also about the same distance from the More Ranch structure, which proved a large gas producer but which failed to yield oil in commercial quantities. Coal Oil Point may "take after" either Elwood or More Ranch, or it may be a medium between the two. A large gas field at this point would be of little value at this time and could even be a liability rather than an asset.

Judging from the cores recovered, the high gas pressure and the position of the well on the structure, the test certainly should open up a new subterranean field. Since no test has been made, however, it must be held in the doubtful class column until given a chance to show its real worth.

Large Operators Active at Middle Dome

Coalinga, Calif.—The Middle Dome at Kettleman Hills is now receiving the attention of large operators, following the expiration of the agreement to stop drilling activities, and this part of the field may soon become an active addition to North Dome Development. Petroleum Securities Company started drilling in Burbank 1, Section 30-23-19, on January 1 and Standard Oil Company of California has located an indirect offset on Section 29, a half mile southeast of Burbank 1. The Middle Dome probably will be productive in the Temblor zone, but the productive area should not be more than one-fourth as large as that on the North Dome. No light oil has been found on the Middle Dome, but Bolsa Chica Oil Corporation completed what might be termed a discovery well at about 2700 feet. The well has produced oil of less than 20 gravity. The agreement to forego drilling expired on Middle Dome leases January 1, having been placed in effect a full six months ahead of the North Dome Agreement, which expires July 1, 1931. This leaves operators free to drill ahead if they can obtain permission from the landowner or government, whichever the case may be.

Sixteen wells are drilling ahead on the North Dome, many of these tests being offsets to fee land producers which were not anticipated when the agreement was drawn up. Petroleum Securities Company has reached a depth of 7750 feet in Felix 2, having opened 1000 feet of Temblor zone below the 8⅝-inch shutoff at 6768 feet. The formation is still running to oil sand and the well probably will be a larger producer than Felix 1, which started much of the present activity in the immediate district. Standard Oil Company is drilling at 6250 feet in No. 35J-47, an offset to Felix 1. This company has passed 7565 feet in No. 29J-65, an offset to Superior Oil Company's Huffman 1, but probably will not complete the well above 8000 feet. Huffman 1 was drilled to 8323 feet and came in with an initial flow of 12,000 barrels.

Plug Back in Capitan Test

Santa Barbara, Calif.—General Petroleum Corporation is not satisfied with developments below the principal producing formation in the Capitan field, a small producing district 10 miles west of Elwood, and will back up from 4071 feet to 2700 feet for a test of the formations between 2000 feet and the top of the plug. The discovery well was completed in this field more than a year ago at about 1300 feet and General Petroleum Corporation drilled Erburu 8 to the Sespe with results previously mentioned. The deep test was fairly conclusive, since no important showings were found below 3000 feet. Erburu stopped in the red shale.

Open Acreage Sought Near Weed Patch Discovery

Los Angeles.—Discovery of the Weed Patch field and showings encountered in certain wildcats along the fringe of the valley have sent several major companies in search of open acreage over a wide area southeast of Bakersfield. The Arvin district, which lies about midway between Comanche Point and Weed Patch has been singled out as a likely chance, but much of this area is already under lease. Geophysically, the Arvin district resembles the Weed Patch field, while the discovery of the latter has stimulated interest in this type of subsurface work.

Shell Oil Company is making a deep test of Porter-Day 1, discovery well in the Weed Patch field, after a flow test which averaged more than 1100 barrels per day. The well was killed at its completion depth of 5789 feet and is now drilling ahead at 6700 feet.

J. J. Ritchie is drilling at 5300 feet in No. 1, Section 33-11-19, a wildcat test east of Wheeler Ridge and south of Weed Patch, following the cutting of sand which contained some oil. Examination of the last cores showed a formation which may prove to lie just above the Temblor and further drilling will be done in an effort to reach this objective.

North Belridge

Bakersfield, Calif.—Richfield Oil Company is coring ahead at 6375 feet in Belridge 1, a deep test in the North Belridge field. The top of the Temblor zone contained water, but cores below 6000 feet showed better oil sand. A string of nine-inch casing at 5580 feet either failed to shut off the water or accomplished its purpose, only to be of no service in handling the formation water. If another production test is made, it will be necessary to run a smaller string of casing to eliminate possibility of top water.

Pogue Visits California

Los Angeles.—Joseph E. Pogue, well known petroleum economist of New York City, stressed the necessity of reductions in gasoline stocks and a tapering off of drilling operations, in a recent interview in Los Angeles. Pogue is spending some time in California while conducting a survey on the possibilities of the Temblor zone, from which Kettleman Hills and North Belridge are producing. He is much impressed with the potentialities of Kettleman Hills and will make a special study of this field.

Lost Hills Extension Shows Water

Bakersfield, Calif.—Universal Consolidated Oil Company's No. 49, a deep test in the Lost Hills field, has been recemented under heavy pressure, in an effort to develop production in the Temblor zone. The well was originally drilled to 4911 feet and a string of nine-inch casing cemented at 4782 feet. The first production test showed salt water and there is a fear that the flow came from the sand and not from above the formation tested. This well promised to extend the producing limits of the Temblor zone to Lost Hills, but indications now point to a smaller potential producing area than originally mapped.

Abandon Wildcat Test

King City, Calif.—Standard Oil Company of California has abandoned Piedmont 1, a wildcat test on Section 23-2-7, at 6093 feet. Only negligible showings were encountered.

Louisiana--Arkansas Field Notes

Drilling Activity at Low Ebb In Arkansas

SHREVEPORT.—Drilling activity in Arkansas continued at a low ebb during the week, ending January 3, only two wells being completed. One of these was Lavaca Oil & Gas Company's L. Wright 1, Section 29-8-30, Sebastian County, which gauged 6,000,000 feet of dry gas with 220 pounds rock pressure at 2930 feet. The other completion was Ohio Oil Company's W. R. Carin 10, Section 1-17-14, Union County, Champagnolle (Rainbow City) district, which is pumping 500 barrels of fluid daily, only two per cent of which is oil, from 3010 feet. Only one new location was announced for Arkansas, this being another test by Ohio Oil Company in Champagnolle.

Arkansas-Louisiana Pipe Line Company late last week was drilling hard sand at 3310 feet in McFadden & Brooks 2, NE NW Section 15-9-21, a wildcat in Pope County, after the test showed 1,000,000 feet of gas at 3285 feet; 13⅜-inch casing was set some time ago at 1900 feet.

A. B. Turner, Trustee's Brown 1, Section 23-15-18, Ouachita County, about two miles from production in the little Mount Holly field, continues to check high having topped red beds at 2700 feet. It was drilling late last week at 2750 feet.

Zwolle is Extended in Two Directions

SHREVEPORT.—Extension of the Zwolle east field proper one-half mile due east and extension of the southeast off-shoot of the same field nearly two miles south and slightly east, the latter well making the erratic chalk rock producing field now 19 miles from east to west of freakish producing territory, appear likely as a result of developments during the week ending January 3.

A half mile due east of the east field Lacey Petroleum Company's Cooper 1, NE SW Section 30-8-11, which had been standing with a little oil in the hole for some time, made a head of oil January 2 and is now standing with the hole full of oil as preparations are being made to standardize the well. This test topped Zwolle marl at 2306 feet, 6⅝-inch casing having been set at 2270 feet. Total depth is 2620 feet.

David M. Lide's Ponder 1, NW NE Section 15-7-11, two miles southeast of the four-mile southeast extension producing part of the Zwolle area, had been shut down at 2800 feet for over a month. During the last week it was opened and headed. The hole is standing full of oil and tankage is being built and the well standardized. This test topped Zwolle marl at 2393 feet and the chalk at 2407 feet where it showed some oil but later on being tested at several levels in the Zwolle chalk it was dry. Its behavior recalls earlier wells in the field especially in Blue Lake (West Zwolle) where wells apparently dry when allowed to stand later became good pumpers or starting with a small initial later increased their oil yield. Lide already has derrick up for Ponder 2, NE NW Section 15-7-11.

R. L. Gay, Trustee, discoverer of the field, made location for Sabine A-2, NE NW Section 1-7-12, offsetting a 72-barrel producer, completed three-quarters of a mile from production last week, which is a connecting link between three parts of the field. H. W. Parritt also made location for Bowman-Hicks B-1, SE NE Section 2-7-12, offsetting a well which is showing for a producer. Texas Company has derrick up for Stille 2, NE NW Section 3-7-11, a half mile northeast of production in the southeast offshoot of the field. W. M. Coates made location for two tests on the Sabine Lumber Company land both in Section 1-7-12.

These six new locations for Zwolle comprised the majority of new activity started during the week. Red Hawk Oil Company has derrick up on 4000-acre block in Webster Parish for a test, this being Matthews 1, SE NW Section 11-23-9 H. I. Morgan is rigging up to deepen Kendricks B-10, Section 22-19-11, Bossier Parish, offsetting his recent gasser completed in a new sand stratum of the upper Trinity at 1840 feet below oolitic lime. The test to be deepened now has depth of 1750 feet. Ouachita Natural Gas and Oil Company, Incorporated, made location for a wildcat in Union Parish, Farmerville district, in Smith 1, SW NE Section 36-20-2E.

Claiborne Parish Test Near Contract Depth

Shreveport.—Prairie Oil and Gas Company's F. B. Shackelford 1, SE NE Section 30-23-5W, northeast Claiborne Parish, is nearing the contemplated depth of 5,000 feet, late last week having been drilling in red shale at 4330 feet. This test passed through the anhydrites and oolitic lime of the upper Trinity without getting a show. Twenty miles to the south wet gas production is found at the 4400-4500-foot level in the oolitic lime. Elevation of Shackelford 1 is 226 feet and the anhydrites was topped at 3889 feet, Blossom being topped at 2729 feet.

Large Gas Well Completed in Jackson Field

JACKSON, Mississippi.—The southeastern part of the Jackson gas field added another gas producer during the week ending January 3 when Feazel Oil and Gas Company's Cox 1, SE NE Section 12-5-1E, Rankin County, was gauged as a 40,768,000-cubic foot gasser at total depth of 2392 feet, in four feet of Midway chalk. Elevation is 269 feet. The Midway shale was topped at 2296 feet. The well has been sold to Gulf States Creosoting Company

In the northwest part of the Jackson field and just south of Mississippi Petroleum Company's Baptist Orphanage 2, SE SE Section 28-6-1E Hinds County, which was a gas producer, Atkisson and associates are having trouble with Wiggins 1, NW NE Section 33-6-1E, which came in during the week at total depth of 2494 feet making an estimated gas yield of 6,000,000 to 8,000,000 cubic feet of gas.

(Continued on page 70)

Summary of Field Operations for December, 1930

New Wells Boost Potentials in December; Production Lower

NEW wells completed during December showed a gain over the preceding month and the quantity of new oil production obtained had the effect of boosting the potential crude supply of the United States. Although there was a gain of 226 well completions during December, the number of producing wells completed only increased by six wells over the number completed in November. Bringing in of large capacity wells in several of the flush areas of the country, however, resulted in a gain in new oil production during the month of more than 78,000 barrels; total new oil production increasing from 901,046 barrels in November to 979,111 barrels in December.

Of particular significance to the industry is the fact that actual crude production for December receded to the lowest point of the year. Crude output of the United States during the month is estimated to have aggregated about 67,811,550 barrels, compared with 68,639,150 barrels in November. The daily average for the month is estimated at about 2,187,450 barrels, against 2,288,000 barrels in November. This represents a decline of slightly more than 100,000 barrels a day. All major producing areas of the United States contributed to this decline, with Texas showing the largest decline. Texas, outside of the Gulf Coast, succeeded in reducing the daily average crude production of its fields about 44,400 barrels daily, reflecting the stringent measures of curtailment that were put into effect in the state toward the close of the year. Oklahoma continued to reflect curtailment during December when the daily average crude production of that state receded from 491,550 barrels in November to 460,600 barrels, a decline of 30,950 barrels a day.

Drilling Total Up

Drilling during December resulted in the completion of 1479 wells, of which 650 were oil wells, 310 were gas wells, and 519 failures.. This represented a gain of 226 total wells; six new oil wells; 93 gas wells and 127 failures. The average initial oil production per well during December was 1506 barrels, compared with approximately 1400 barrels per well in November. Initial production per well for the year 1930 averaged 932 barrels, against 488 barrels during 1929. This shows how potentials were augmented during the past year, as a direct result of deevlopments in the new flush areas of Oklahoma, California and Texas. Increased well completions were reported by the Eastern States, California, Oklahoma, Kansas, Arkansas and Texas. Texas reported a gain of about 100 new well completions, while the Eastern States reported a combined gain of 115 well completions.

Initial oil production was boosted materially in Oklahoma, showing a gain during December of more than 200,000 barrels. This was all due to a sharp gain in new production of the Oklahoma City field where initial output rose from 346,001 barrels in November to 562,593 barrels in December. California reported a gain of nearly 7000 barrels in new oil production during December; Kansas, a gain of nearly 6000 barrels; Texas, a gain of 45,000 barrels. New operations in the Lea County, New Mexico, area resulted in a sharp decline in new oil production, from 171,395 barrels in November to only 88,398 barrels in December. Louisiana also reported a decline in new oil production of about 11,000 barrels. Eastern States contributed to the increase in initial oil output to the extent of about 4000 barrels.

UNITED STATES PRODUCTION

Following is the gross production in the United States (in barrels of 42 gallons) during December, as compiled from daily averages reported by the American Petroleum Institute. There are differences between the figures shown below and those contained elsewhere in this issue. The figures below are the result of calculating A. P. I. estimates for the representative fields.

State—	Daily Average December*	Daily Production November	Total Production December*
Oklahoma	460,600	491,550	14,279,000
Kansas	105,600	111,400	3,274,650
Texas (outside Gulf Coast)	534,950	579,350	16,581,900
Gulf Coast	189,250	190,100	5,866,750
North Louisiana	43,050	44,050	1,334,150
Arkansas	51,250	52,000	1,588,450
Eastern States	111,600	116,400	3,460,250
Rocky Mountains	100,300	101,950	3,109,500
California	590,850	601,200	18,316,900
Total	2,187,450	2,288,000	67,811,550

*Preliminary—subject to revision.

Decline for Year

Preliminary results for last year reveal a material decline in number of new wells completed, although the quantity of new oil production obtained showed a sharp gain. Following is a comparison of the preliminary field data for the year 1930, compared with 1929:

Annual Check of Field Operations
1930 — 1929
(United States Total)

	1930	1929	Increase	Decrease
Wells completed	19,356	23,463	.....	4,107
Producers	10,512	13,125	.....	2,613
Gas Wells	2,944	3,109	.....	165
Failures	5,891	7,211	.....	1,320
Initial yield	9,804,145	6,404,145	3,400,000	....

The foregoing comparison explains in a striking manner the unusual success that attained oil field developments during the past year. The gain of 3,400,000 barrels in oil production, despite a material decline in number of wells completed furnishes mute evidence of the predicament faced by the oil industry in its battle against over-production. These figures also emphasize the necessity for further curtailment in drilling, particularly in the flush areas such as Oklahoma City, which field is wholly responsible for the flood of new oil obtained during the past year.

In the Eastern fields, the districts reporting gains in

UNITED STATES FIELD STATISTICS

Following are the completions, showing oil wells, gas wells, failures and initial production of crude oil and gas by states for December as compiled by THE OIL WEEKLY:

State—	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*
Missouri	1	..	..	1	.....	....
Arkansas	14	4	5	5	332	37½
California	97	93	..	4	70,590	....
Illinois	13	9	1	3	70	¼
Indiana	11	4	5	2	120	6¼
Kansas	79	31	17	31	18,706	108
Kentucky	125	54	37	34	8,143	33½
Louisiana	69	16	21	32	5,348	488¼
Michigan	24	9	4	11	1,017	2¼
Mississippi	7	..	5	2	.....	209
New York	1	1	..	..	3	....
New Mexico	11	10	1	..	88,398	120¼
Ohio	200	51	74	75	787	50
Oklahoma	243	116	39	88	608,398	271½
Pennsylvania	57	43	3	11	121	3¼
Texas	453	199	53	201	176,895	849¼
West Virginia	74	10	45	19	183	38
Total	1,479	650	310	519	979,111	2,217

*Millions of cubic feet.

new well operations and initial oil production were Ashland, Licking and Medina, in Central Ohio; Washington, in Southeastern Ohio; Hancock, in Northwestern Ohio; Hart, Kentucky; Crawford, Illinois; and Isabella, Michigan. Pennsylvania reported a sharp decline in new well operations as well as initial oil production, which was due to materially lower results in the Bradford area. In California, the Long Beach field reported a gain in well completions of from 24 wells in November to 34 in December; initial production of that field increased more than 26,000 barrels. Elwood reported fewer new wells than in November, although there was a gain in initial oil production, Playa del Rey operations yielded slightly less oil than in November, although the number of wells completed increased from 40 in November to 48 in December.

Kansas reported an increase in wells completed, from 55 in November to 79 in December, while initial oil production also increased from 12,895 barrels in November to 18,706 barrels in December. McPherson County influenced the gain with 13,243 barrels of new oil production from nine wells, against only 25 barrels from one well in November.

PAST TWELVE MONTHS

The record for the past 12 months is an interesting study for comparative purposes, the following table giving the field statistics for all states:

Month—	Completions	Producers	Gas wells	Failures	Initial Prod.
November, 1929	1,965	1,139	283	543	442,170
December	1,791	978	275	538	433,264
January, 1930	1,918	1,142	296	480	685,325
February	1,463	881	201	381	990,869
March	1,544	794	220	530	665,535
April	1,702	1,023	180	499	776,024
May	1,973	1,125	228	611	771,977
June	1,679	950	223	506	580,997
July	2,144	1,167	306	671	845,068
August	1,837	930	310	597	1,160,055
September	1,165	619	208	338	833,109
October	1,199	587	245	367	615,002
November	1,253	644	217	392	901,046
December	1,479	650	310	519	979,111

Note—Rocky Mountain data omitted.

The Louisiana Gulf Coast area reported a material decline in initial oil production, from 13,145 barrels in November to only 2672 barrels in December. Oklahoma and New Mexico, mentioned previously, reported the most spectacular changes during December. Oklahoma well completions increased from 196 in November to 243, while initial oil production rose from 395,804 barrels in November to 608,398 barrels in December. New Mexico reported a decline in well completions of nine and a sharp slump in new oil production of 83,000 barrels.

In the Texas fields, Gulf Coast, Southwest Texas and North Texas reported increased well completions during December while the Texas Panhandle, West Central Texas, East Central Texas and West Texas reported declines. Initial oil production was larger in the Texas Gulf Coast, North Texas and East Central Texas. The Van field, in East Central Texas, reported an increase in new oil production of more than 54,000 barrels, while the Texas Gulf Coast and Southwest Texas reported a slump in initial production of about 4000 barrels and 7000 barrels, respectively.

Large Gas Well Completed in Jackson Field

(*Continued from page 68*)

With elevation of 307.8 feet this well had Midway shale topped at 2392 feet and a cap rock was struck at 2490 feet, where a string of second-hand six-inch casing was set. Gas is now coming up between this casing and surface pipe, so operators are preparing to kill it to have the bad joint cemented.

Only one new location was made in the Jackson field during the week this being Love Petroleum Company's Taylor 1, SE NW Section 34-6-1E, Hinds County.

In the Amory district of northeast Mississippi, Amory Petroleum Corporation probably will not deepen Carter 3, SE SE Section 7-13S-17W, Monroe County, which is making gas at an estimated production of 100,000 to 250,000 cubic feet of gas daily at total depth of 2400 feet. This well encountered 14 feet of sand from 2382 to 2396 feet and then had four feet of shale to the bottom. The yield is believed to be coming from top of the sand. The well is being alternately closed and opened in an effort to build up volume. It is Amory's third gasser. The rig probably will be moved over to Harris 1, NW NE Section 18-13S-17W, where workers already are at work digging slush pits.

Arkansas-Louisiana Pipe Line Company, a subsidiary of Arkansas Natural Gas Corporation, has bought a 5000-acre block of wildcat acreage in Grenada County, Mississippi, from J. P. Evans of Shreveport, for an unannounced consideration. This block is said to be practically on top of a 880 gamma (relief 280 gamma) high and extends down the south and southwest flank of this anomaly. The acreage is grouped in Sections 4, 5, 6, 7, 8, 17 and 18-20N-3E, Grenada County. The block on which Carter Oil Company and associates have derrick up for a test is on another high in the same county, the latter high having registered 1050 gammas with a 450 gamma relief.

It is rumored that S. P. Borden and associates, who are ready to spud in McIntosh 1, SW NE Section 5-8N-16W, Covington County, south Mississippi, are preparing to turn over their block and this test to United Gas Corporation or one of its subsidiaries.

Two core drill outfits which have been used by Gulf Refining Company for a series of tests on a block of acreage under option in Clarke County, east central Mississippi, bordering the Alabama line, have ended their tests and probably will be stored or transferred immediately to another place.

Summary of Field Operations for December, 1930

RECAPITULATION—UNITED STATES

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Initial Production Gas*	Total Production
Oklahoma	243	116	39	88	608,398	271½	14,279,000
Kansas	79	31	17	31	18,706	108	3,274,650
Texas (outside Gulf Coast)	376	150	50	176	155,476	749¼	16,581,900
Gulf Coast	96	54	3	30	24,091	100	5,866,750
North Louisiana	50	11	21	18	2,676	488¼	1,334,150
Arkansas	14	4	5	5	332	37½	1,588,450
Eastern States	513	181	174	158	10,448	342¼	3,460,250
New Mexico	11	10	1	.	88,398	120¼	†
Rocky Mountains	a	a	a	a	a	a	3,109,500
California	97	93	..	4	70,590	....	18,316,900
Total for December	1,479	650	310	519	979,111	2,217	67,811,550
Total for November	1,253	644	217	392	901,046	1,477½	68,675,600

*Millions of cubic feet.
†Included in Rocky Mountains Estimate.
(a) Not available.

EASTERN STATES

NEW YORK

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Initial Production Gas*
Allegheny	1	1	..	..	3	..
Total	1	1	..	..	3	..

PENNSYLVANIA

Allegheny	2	1	..	1	15	1
Beaver	1	1	..	..	3	..
Bradford	25	24	1	..	63	¼
Butler	6	3	..	3	7	..
Center-Middle	6	6	..	..	15	..
Clarion	10	7	1	2	14	1
Greene	2	1	..	1	4	..
Somerset	2	..	1	1	..	1
Washington	3	..	..	3	..	..
Total	57	43	3	11	121	3¼

CENTRAL OHIO

Ashland	15	5	4	6	38	4¾
Athens	14	..	8	6	..	7¾
Belmont	4	..	2	2	..	¾
Carroll	1	1	..	..	5	..
Coshocton	5	1	2	2	3	1
Fairfield	3	..	2	1	..	¼
Guernsey	3	2	..	1	30	..
Harrison	1	1	..	..	2	..
Hocking	2	..	1	1	..	1¾
Holmes	1	..	..	1	..	..
*Millions of cubic feet.						
Knox	8	3	2	3	71	¾
Licking	8	3	4	1	245	1¼
Lorain	6	..	1	5	..	1¾
Medina	16	6	2	8	104	¾
Muskingum	6	2	3	1	28	2¼
Perry	10	..	6	4	..	6¾
Richland	1	..	1	..	..	½
Stark	1	..	1	..	..	6½
Summit	2	..	2	..	..	4¼
Tuscarawas	3	..	1	2	..	¼
Wayne	7	1	3	3	45	¾
Total	117	25	45	47	569	40¾

SOUTHEASTERN OHIO

Monroe	3	..	1	2	..	¼
Morgan	6	..	6	..	..	1¾
Noble	5	2	1	2	2	¾
Washington	50	20	8	22	54	17¼
Total	64	22	16	26	56	3¾

WEST VIRGINIA

Boone	5	1	2	2	6	¾
Cabell	6	..	6	..	..	2½
Calhoun	11	..	6	5	..	5
Clay	4	..	3	1	..	4¼
Doddridge	1	1	..	..	1	..
Fayette	1	..	..	1	..	..
Gilmer	7	3	4	..	35	3¾
Jackson	1	1	..	..	12	..
Kanawha	8	1	7	..	2	9½
Lewis	4	..	4	..	..	1
Marion	3	..	2	1	..	2¼
Marshall	3	..	3	..	..	2¼
Mason	2	..	1	1	..	1½
Monogalia	1	..	..	1	..	..
Monroe	1	..	..	1	..	..
Ritchie	2	1	1	..	125	½
Roane	3	1	2	..	1	¾
Wayne	3	1	1	1	1	¾
Wetzel	6	..	3	3	..	3
Wirt	2	..	..	2	..	..
Total	74	10	45	19	183	38

NORTHWESTERN OHIO

Hancock	10	1	9	..	10	3
Hardin	10	1	9	..	10	3
Sandusky	2	..	2	..	..	¾
Seneca	4	1	1	2	22	¼
Wyandot	1	..	1	..	..	2
Total	19	1	13	2	162	5¾
Total Ohio	200	51	74	75	787	50

KENTUCKY

Barren	16	2	12	2	190	8¼
Butler	1	..	..	1	..	..
Cumberland	2	2	..	..	65	..
Estill	6	2	..	4	2	..
Hancock	8	3	..	5	200	6¾
Hart	30	34	11	14	7,455	9
Henderson	1	1	..	..	3	..
Lee-Owsley	3	3	..	..	42	..
MaGoffin	3	3	..	..	18	..
McLean	3	1	..	2	50	..
Metcalf	9	..	8	1	..	4
Muhlenberg	1	1	..	..	30	..
Ohio	9	3	4	2	178	3
Warren	2	..	..	2	..	..
Wayne	1	..	..	1	..	..
Webster	2	..	2	..	..	2¾
Total	125	54	37	34	8,143	33½

INDIANA

Davies	1	..	..	1	..	..
Gibson	1	1	..	..	20	..
Perry	1	1	..	..	5	..
Pike	4	1	3	..	70	5
Sullivan	2	..	1	1	..	1
Vandeburg	1	..	1	..	..	¼
Vigo	1	1	..	..	25	..
Total	11	4	5	2	120	6¼

ILLINOIS

Clark	1	1	..	..	5	..
Crawford	6	3	1	2	24	¼
Lawrence	2	2	..	..	8	..
Monroe	3	2	..	1	3	..
Wabash	1	1	..	..	30	..
Total	13	9	1	3	70	¼

MICHIGAN

Clare	1	..	1	..	..	¼
Isabella	17	7	1	9	917	1
Livingston	1	..	1	..	..	¼
Lenawee	1	..	..	1	..	..
Muskegon	3	2	1	..	100	¼
St. Clair	1	..	..	1	..	..
Total	24	9	4	11	1,017	2¼

MISSISSIPPI

Wildcats	7	..	5	2	..	200
Total	7	..	5	2	..	200

MISSOURI

St. Louis	1	..	..	1	..	..
Total	1	..	..	1	..	..
Total Eastern States	513	181	174	158	10,441	342¼
Total Production Eastern States (Barrels)						3,460,250

CALIFORNIA

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*
Athens-Rosecrans	1	1	..	..	500	..
Elwood	2	2	..	..	11,850	..
Fruitvale	1	1	..	..	250	..
Long Beach	34	34	..	..	31,025	..
Newhall	1	1	..	..	160	..
Playa Del Ray	48	48	..	..	19,205	..
Rincon	1	1	..	..	150	..
Santa Barbara Mesa	1	1	..	..	1,000	..
Ventura	4	4	..	..	6,450	..
Wildcats	4	..	..	4	...	..
Totals	97	93	..	4	70,590	..

CALIFORNIA PRODUCTION SUMMARY

	Barrels
Inglewood	471,000
Midway-Sunset	1,807,000
Ventura	1,429,000
Seal Beach	541,400
Elwood	1,090,800
Kettleman	729,600
Santa Fe Springs	2,725,400
Long Beach	3,025,400
Huntington Beach	827,600
Dominguez	306,400
Playa Del Rey	1,394,300
Others	3,969,000
Total	18,316,900

OKLAHOMA

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*
Caddo	5	2	..	3	205	..
Carter	13	7	..	6	6,515	..
Cleveland	2	..	..	2	...	..
Coal	2	..	..	2	...	..
Comanche	2	..	..	2	...	..
Creek	25	12	7	6	1,737	6¼
Garfield	2	..	2	..	...	4½
Grady	4	..	2	2	...	25½
Grant	3	..	2	1	...	36½
Hughes	3	..	1	2	...	20
Kay	5	1	..	4	30	..
Kiowa	1	..	..	1	...	..
Latimer	1	..	..	1	...	..
Lincoln	2	..	1	1	...	4
Logan	2	1	..	1	680	..
Marshall	1	..	..	1	...	..
Muskogee	13	1	2	10	5	4½
Noble	2	..	1	1	...	14
Okfuskee	5	1	1	3	20	3
Oklahoma	51	48	1	2	562,593	8
Okmulgee	14	3	7	4	115	16
Osage	14	8	2	4	501	3¾
Pawnee	5	..	1	4	...	1½
Payne	3	..	1	2	...	5½
Pittsburg	5	..	5	..	...	37¼
Pontotoc	1	1	..	..	640	..
Pottowatomie	11	11	..	..	8,120	..
Seminole	15	13	..	2	27,066	71
Stephens	8	3	..	5	88	..
Tulsa	9	2	1	6	48	3¾
Wagoner	13	2	2	9	35	6½
Woods	1	..	..	1	...	..
Total	243	116	39	88	608,398	271½

OKLAHOMA PRODUCTION SUMMARY

	Barrels
Braman	57,450
Blackwell	68,550
Hubbard	26,300
Thomas	12,400
Tonkawa	128,000
Garber	132,150
Burbank	406,600
Osage	707,000
Cushing	371,050
Yale	162,950
Davenport	27,250
Bristow	331,500
North Okmulgee	247,100
South Okmulgee	152,100
Cromwell	153,000
Papoose	65,450
Wewoka	134,650
Seminole	426,500
East Seminole	58,350
Bowlegs	416,850
Searight	173,050
Little River	719,000
East Little River	331,800
Earlsboro	539,000
East Earlsboro	544,400
Duncan	203,500
Graham	70,850
Fox	25,700
Healdton	295,200
Hewitt	162,850
Scholem-Alechem	319,550
Pearson	15,550
Oklahoma City	2,642,750
Missien	195,100
Carr City	384,600
Asher	24,800
Sasakwa	135,850
St. Louis	674,350
Allen	393,500
Maud	88,700
Logan	98,300
West Asher	282,100
South Earlsboro	257,650
Konowa	432,850
Others	1,182,800
Total	14,279,000

KANSAS

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*
Butler	5	2	..	3	170	..
Chautauqua	1	..	..	1	...	..
Coffey	1	..	..	1	...	..
Cowley	3	..	2	1	...	2¾
Douglas	1	..	..	1	...	..
Edwards	1	..	1	..	...	6½
Elk	1	..	..	1	...	..
Ellis	4	1	..	3	125	..
Franklin	1	..	1	..	...	3½
Grant	1	..	1	..	...	3
Greenwood	3	2	..	1	435	..
Harper	1	..	..	1	...	..
Lyon	1	..	..	1	...	..
Marion	1	1	..	..	80	..
McPherson	12	9	3	..	13,243	48
Reno	3	..	..	3	...	..
Rice	5	3	..	2	1,700	..
Rooks	2	1	..	1	300	..
Rush	1	..	..	1	...	..
Russell	3	2	..	1	351	..
Sedgewick	16	9	..	7	2,405	..
Seward	1	..	1	..	...	1
Stevens	8	..	8	..	...	43¾
Sumner	3	1	..	2	50	..
Total	79	31	17	31	18,706	108

KANSAS PRODUCTION SUMMARY

	Barrels
Greenwood	494,900
Florence	23,100
Peabody	68,700
Eldorado	399,200
Augusta-Fox-Bush	83,550
Rainbow Bend	31,450
Voshell	399,350
Russell	89,400
Churchill	95,550
Oxford	69,500
Sedgewick	680,950
Others	839,000
Total	3,274,650

MOUNTAIN STATES PRODUCTION SUMMARY

WYOMING

Salt Creek	869,550
Grass Creek	63,400
Elk Basin	22,850
Big Muddy	62,000
Lost Soldier	138,850
Rock Creek	66,100
Lance Creek	11,450
Oregon Basin	101,300
LaBarge	52,350
Others	111,900
Total	1,499,750

MONTANA

Cat Creek	35,350
Sunburst	125,850
Pondera	46,100
Others	1,550
Total	208,850

COLORADO

Moffats	31,950
Fort Collins	35,650
Florence	12,750
Others	46,500
Total	126,850

NEW MEXICO

Table Mesa	3,100
Artesia	20,750
Hogback	13,950
Rattlesnake	31,800
Lea County	237,950
Hobbs	960,650
Eddy	5,850
Total	1,274,050
Total Mountain States	3,109,500

NEW MEXICO

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*
Lea	11	10	1	..	88,398	120¼
Total	11	10	1	..	88,398	120¼

ARKANSAS

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*
Union	5	2	1	2	42	12
Wildcats	9	2	4	3	290	25½
Total	14	4	5	5	332	37½

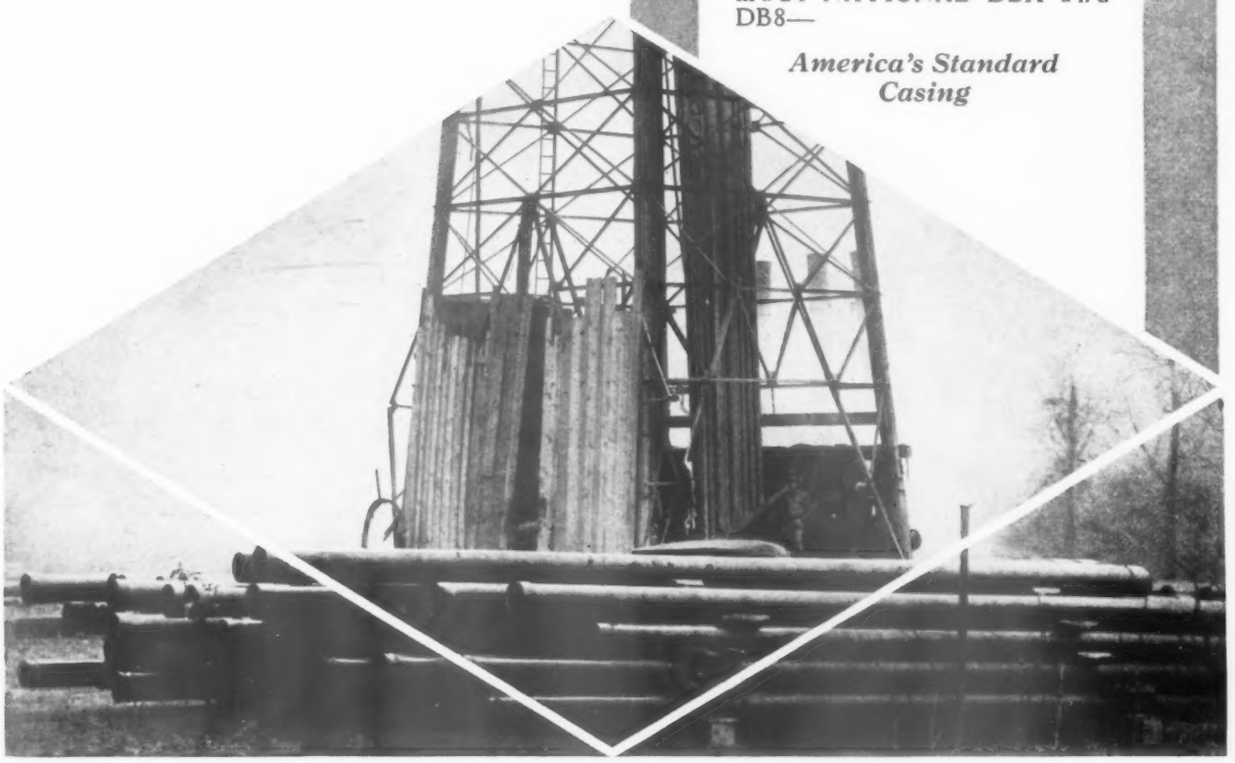
Production's Index to SUCCESSFUL PERFORMANCE

NATIONAL A.P.I. DIAMOND BX AND B8 CASING

Look up the answer to the casing question either by turning back through decades of time for the evidence or by following the trend of today's leading operators. From the early days down to the present time the index clearly shows NATIONAL Diamond BX and B8 Casing predominating in successful performance.

Despite all variations in depths, formations and working conditions—NATIONAL Casing maintains its ability to successfully overcome every obstacle that stubborn holes offer. Successful performance means—uniform tensile strength—resistance to collapse—accuracy of threads and make-up of joints . . . features that have made NATIONAL DBX and DB8—

America's Standard Casing



NATIONAL TUBE COMPANY
Frick Building, Pittsburgh, Pa.

QUALITY PRODUCTS — Dependable Service

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Pacific Coast Distributors—Columbia Steel Company, Russ Building, San Francisco, Calif. *Export Distributors*—United States Steel Products Company, 30 Church Street, New York, N. Y.

TEXAS RECAPITULATION

	Completions	Producers	Gas wells	Failures	Initial Oil	Production Gas*	Total Production
Panhandle	31	7	18	6	2,869	416	2,134,400
South Texas	90	41	10	39	13,453	241¼	2,612,050
North Texas	118	51	1	66	4,839	2½	2,005,700
East Texas	8	...	4	4	.....	42¼	.....
East Central Texas	31	25	..	6	128,770	...	1,258,800
West Central Texas	72	10	16	46	1,395	39¾	902,900
West Texas	26	16	1	9	4,150	7½	7,668,050
Total Texas (outside Gulf Coast)	376	150	50	176	155,476	749¼	16,581,900
Gulf Coast	77	49	3	25	21,419	100	5,035,600
Grand Total	453	199	53	201	176,895	849¼	21,617,500

*Millions of cubic feet.

ARKANSAS PRODUCTION SUMMARY

	Barrels
Eldorado	121,950
Champagnolle	108,600
Smackover Light	147,000
Smackover Heavy	1,092,050
Stephens	27,350
Nevada	31,300
Lisbon	26,300
Others	33,900
Total	1,588,450

PANHANDLE TEXAS

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*	Total Prod.
Carson	6	..	5	1	194	..	160,200
Gray	13	6	5	2	2,650	176½	1,591,700
Hutchinson	5	1	4	..	25	57½	362,200
Moore	1	..	1	..	...	8	.....
Randall	1	..	..	1	...	..	.....
Wheeler	5	..	3	2	...	174	13,900
Others	..	..	..	..	...	..	6,400
Total	31	7	18	6	2,869	416	2,134,400

SOUTHWEST TEXAS

Bastrop	1	..	..	1	...	..	.....
Bexar	4	1	1	2	8	¾	.....
Brooks	1	..	..	1	...	..	.....
Caldwell	2	1	..	1	2	..	.....
Chapman	13	7	..	6	735	..	172,800
Dale	..	..	..	..	...	..	8,100
Darst Creek	16	15	..	1	8,629	..	1,127,900
De Witt	1	..	..	1	...	..	.....
Duval	4	2	..	2	2,150	..	.....
Edwards	1	..	..	1	...	..	.....
Goliad	2	1	1	..	...	3	.....
Gonzales	2	..	..	2	...	..	.....
Guadalupe	3	..	..	3	...	..	.....
Jim Hogg	1	..	..	1	...	..	.....
Jim Wells	2	..	2	..	...	70	.....
Karnes	1	..	..	1	...	..	.....
Kendall	2	..	..	2	...	..	.....
Kerr County	1	1	..	..	250	..	.....
Laredo	..	..	..	..	...	..	148,500
Live Oak	3	..	1	2	...	3	.....
Luling	..	..	..	..	...	..	303,950
Lytton Springs	..	..	..	..	...	..	22,400
Medina	1	..	..	1	...	..	.....
Milam	1	..	..	1	...	..	.....
Nueces	3	1	1	1	134	40	.....
Roma	1	..	..	1	...	..	.....
Salt Flat	..	..	..	..	...	..	467,900
Somerset	..	..	..	..	...	..	40,300
Webb	4	2	1	1	70	30	.....
White Point	1	..	1	..	...	34½	.....
Zapata	18	10	2	6	1,350	60	.....
Zavalla	1	..	..	1	...	..	.....
Others	..	..	..	..	...	..	20,200
Total	90	41	10	39	13,453	241¼	2,612,050

NORTH TEXAS

Archer	18	7	..	11	157	..	394,500
Baylor	1	..	..	1	...	..	.....
Burkburnett	..	..	..	..	...	..	210,400
Clay	1	..	..	1	...	..	.....
Cooke	8	1	..	7	8	..	.....
Electra	..	..	..	..	...	..	281,400
KMA-Iowa Park	..	..	..	..	...	..	123,050
Montague	3	2	1	..	14	2½	223,500
Wichita	13	7	..	6	345	..	.....
Wilbarger	5	3	..	2	25	..	449,600
North Young	69	31	..	38	4,290	..	271,550
Others	..	..	..	..	...	..	51,700
Total	118	51	1	66	4,839	2½	2,005,700

WEST CENTRAL TEXAS

Brown	10	1	1	8	305	2¼	135,550
Burnet	1	..	..	1	...	..	.....
Callahan	6	..	3	3	...	2¾	73,800
Coleman	11	2	3	6	310	5⅛	59,750
Eastland	7	..	3	4	...	13¼	130,350
Erath	1	..	1	..	...	¾	.....
Jack	3	..	2	1	...	2	49,300
Lampasas	1	..	..	1	...	..	.....
Palo Pinto	3	..	2	1	...	10	11,750
Shackelford	8	1	..	7	10	..	134,100
Stephens	3	..	..	3	...	..	140,350
Throckmorton	2	..	..	2	...	..	19,500
Young County	9	5	1	3	750	4	.....
South Young	7	1	..	6	20	11	87,150
Others	..	..	..	..	...	..	61,300
Total	72	10	16	46	1,395	39¾	902,900

EAST TEXAS

Panola	3	..	3	..	...	1¾	.....
Wildcats	5	..	1	4	...	41	.....
Total	8	..	4	4	...	42¼	.....

EAST CENTRAL TEXAS

Boggy Creek	..	..	..	..	...	..	74,950
Corsicana-Powell	..	..	..	..	...	..	158,350
Currie	..	..	..	..	...	..	9,650
Joiner District	..	..	..	..	...	..	14,500
Limestone	1	..	..	1	...	..	.....
Mexia	..	..	..	..	...	..	119,650
Nigger Creek	..	..	..	..	...	..	5,550
Richland	..	..	..	..	...	..	4,650
Van Zandt	24	24	..	..	125,770	..	849,200
Wortham	..	..	..	..	...	..	18,600
Wildcats	6	1	..	5	3,000	..	.....
Others	..	..	..	..	...	..	3,500
Total	31	25	..	6	128,770	..	1,258,800

WEST TEXAS

Crane	2	2	..	..	240	..	1,042,250
Crockett	..	..	..	..	...	..	58,800
Ector	..	..	..	..	...	..	225,950
Howard	1	1	..	..	120	..	595,000
Jones	..	..	..	..	...	..	38,600
Loving	3	3	..	..	970	..	.....
Mitchell-Scurry	..	..	..	..	...	..	64,250
Pecos	5	4	..	1	1,980	..	123,250
Reagan	..	..	..	..	...	..	701,650
Upton	1	1	..	..	340	..	.....
Ward	3	3	..	..	165	7	.....
Winkler	2	1	..	1	100	..	1,720,750
Yates	..	..	..	..	...	..	2,900,750
Wildcats	9	1	1	7	235	½	.....
Others	..	..	..	..	...	..	196,800
Total	26	16	1	9	4,150	7½	7,668,050

TEXAS GULF COAST

Allen	1	..	..	1	...	..	.....
Barbers Hill	11	9	..	2	9,800	..	727,950
Batson	4	3	..	1	19	..	31,950
Big Creek	..	..	..	..	...	..	97,150
Blue Ridge	..	..	..	..	...	..	49,950
Bloomington	2	..	1	1	...	35	.....
Boling	..	..	..	..	...	..	26,600
Clay Creek	1	1	..	..	60	..	.....
Damon Mound	..	..	..	..	...	..	20,450
Esperson Dome	3	3	..	..	354	..	84,850
Fannett	..	..	..	..	...	..	16,450
Goose Creek	2	1	..	1	40	..	133,350
Grimes	1	..	..	1	...	..	.....
Hankamer	..	..	..	..	...	..	67,200
Hull	1	..	..	1	...	..	234,550
Humble	5	4	..	1	2,095	..	390,750
Moss Bluff	2	1	..	1	200	..	.....
North Dayton	2	..	..	2	...	..	29,350
Orange	3	3	..	..	890	..	63,950
Orchard	..	..	..	..	...	..	60,200
Pettus	8	4	1	3	1,288	35	252,150
Pierce Junction	4	1	..	3	1,000	..	311,300
Port Neches	..	..	..	..	...	..	43,000
Raccoon Bend	2	1	..	1	900	..	268,150
Refugio	15	12	1	2	3,684	30	902,550
Saratoga	2	2	..	..	70	..	35,950
Somerville	..	..	..	..	...	..	41,450
Sour Lake	..	..	..	..	...	..	60,100
South Liberty	3	3	..	..	19	..	85,700
Spindle Top	2	1	..	1	1,000	..	417,900
Stratton Ridge	2	..	..	2	...	..	.....
Sugar Land	..	..	..	..	...	..	362,500
West Columbia	..	..	..	..	...	..	148,050
Wildcats	1	..	..	1	...	..	.....
Others	..	..	..	..	...	..	72,100
Total	77	49	3	25	21,419	100	5,035,600

The Right Combination

for Economical Drilling

PARKERSBURG'S Combination Portable Drilling Machine combines the advantages of steel for strength and rigidity with the features of wood where flexibility is required. The rigid All-Steel Frame is made from structural shapes, riveted and welded. Steel Walking Beam and Steel Wheels all contribute to permanence and freedom from replacements.

In addition to this ideal combination of materials and quality construction, the machine is portable, readily transported by team or tractor, and when on the location it is quickly demounted, set on the usual foundation timbers and keyed to the sills to operate as a Standard Rig.

It moves on wheels, operates on sills, combining efficiency and economy. Due to this feature the Parkersburg Combination eliminates much of the vibration common to machines operating on wheels. It permits faster and deeper drilling and all-around superior performance.

The 4½-Inch Combination Machine, recommended for drilling to 2500 feet, can be used with 66-Foot "A" Type or Three-Piece mast.

Practical simplicity and fewer parts are added advantages, resulting from Parkersburg's thirty-three years of experience which make this machine "the Right Combination" for profitable drilling.

Complete details and prices gladly furnished from our Main Office, or ask any Parkersburg Representative.

The Strength of Steel
The Flexibility of Wood
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THE PARKERSBURG RIG AND REEL CO. — PARKERSBURG WEST VIRGINIA — MADE IN U.S.A.
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Portable Drilling Machines (Wood and Combination-Steel)
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Main Offices and Works
PARKERSBURG, WEST VIRGINIA
NEW YORK - TULSA - FT. WORTH - HOUSTON
Branches In All Active Fields

149-A

NORTH LOUISIANA

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*	Total Prod.
Bossier	3	..	2	1	...	7½	.....
Caddo	2	2	..	..	40	..	344,850
Carterville	..	..	..	..	...	..	60,150
Cotton Valley	..	..	..	..	...	..	57,350
De Soto	1	..	..	1	...	..	85,950
Haynesville	..	..	..	..	...	..	163,300
Holly	..	..	..	..	...	..	30,350
Homer	..	..	..	..	...	..	101,500
La Salle	2	2	..	..	100	..	.....
Morehouse	2	..	1	1	...	26½	.....
Ouachita	3	..	3	..	...	23½	.....
Richland	10	..	10	..	...	313	.....
Union	1	..	1	..	...	2¾	.....
Urania	..	..	..	..	...	..	159,450
Webster	1	1	..	..	24	..	.....
Zwolle	..	..	..	..	...	..	283,850
Wildcats	25	6	4	15	2,512	115	.....
Others	..	..	..	..	...	...	47,400
Total	50	11	21	18	2,676	488¼	1,334,150

LOUISIANA GULF COAST

Barataria	1	..	..	1	...	..	.....
Bayou Bouillon	..	..	..	..	...	..	3,100
Bayou Choctau	1	..	..	1	...	..	.....
Black Bayou	1	..	..	1	...	..	.....
Caillou Island	1	..	..	1	...	..	.....
Dog Lake Bayou	1	..	..	1	...	..	.....
East Hackberry	3	2	..	1	1,512	..	102,600
Edgerly	..	..	..	..	...	..	11,850
Evangeline	..	..	..	..	...	..	58,050
Four Isle Bayou	1	..	..	1	...	..	.....
Hackberry	1	..	..	1	...	..	27,900
Lake Barre	..	..	..	..	...	..	61,100
Lockport	1	1	..	..	180	..	133,200
Napoleonville	2	..	..	2	...	..	.....
Port Barre	..	..	..	..	...	..	62,350
Roanoke	1	..	..	1	...	..	.....
Sorrento	..	..	..	..	...	..	1,550
Sulphur	1	1	..	..	300	..	77,400
Sweet Lake	..	..	..	..	...	..	35,600
Vinton	2	1	..	1	680	..	159,650
White Castle	..	..	..	..	...	..	31,650
Wildcats	2	..	..	2	...	..	.....
Others	..	..	..	..	...	..	65,150
Total	19	5	..	14	2,672	..	831,150
Total Louisiana	69	16	21	32	5,348	488¼	2,165,300

Anticlines Not Always True Indication of Oil

NORMAN, Oklahoma.—Geologic structures which appear to be anticlines are not always anticlines, according to Dr. Chas. N. Gould, director of the Oklahoma Geological Survey, who has been interested in the geology of Oklahoma for many years. Anticlines are usually considered favorable locations for prospecting for oil and gas, and petroleum geologists are constantly engaged in trying to locate these favorable structural conditions.

In eastern Oklahoma, the structures shown on the surface are usually considered as representing true structures. In the red beds of western Oklahoma, however, the conditions are different and the geologist must be careful not to call an apparent structure a true anticline. Many surface indications of anticlines in western Oklahoma are generally regarded by most geologists as due to surface slumping, or the slumping of formations at or near the surface, in such manner as to indicate anticlines, domes, or other structural features.

Various theories have been offered to account for these false structures, according to Dr. Gould. Some geologists believe that in at least some cases the slumping of the formations has been due to the removal of salt or other soluble rock below the surface, permitting the formations on and near the surface to settle. In parts of the red beds area there are considerable thicknesses of salt in the subsurface formations, and the removal of this salt in certain areas by underground waters is believed to have caused much of the slumping. Some geologists also consider that removal of gypsum by solution may have had a part in the slumping.

In some instances geologists have advanced the idea that expansion of anhydrite to form gypsum, thus bowing up the surface rocks in certain areas, has been responsible for the erratic surface folding in the red beds. Expansion of anhydrite to form gypsum could occur if water were brought into contact with the anhydrite, and some geologists believe that water was permitted to come in contact with the anhydrite through cracks and crevices in the surface rocks and that the surface rocks in the vicinity of these crevices were bowed up by expansion of the anhydrite.

Such surface structures, according to Dr. Gould, would not be of any value in prospecting for oil, although they appear to be well defined anticlines or domes, because the structural feature would not extend down to the formations in which oil and gas may be expected to occur under favorable conditions. In eastern Oklahoma, the structures shown on the surface are usually expected to extend to considerable depths below the surface, although all subsurface structures are not easily found on the surface.

Geologists working in the areas where slumping is common soon become familiar with that type of structure and are usually not likely to mistake such a structure for one that may be reflected in the deeper formations. However, Dr. Gould said, the task of locating and mapping true anticlines in a region in which there is much slumping is more difficult than in a region where this feature is not present.

Webster Parish Test May Go to Lower Trinity

Shreveport.—Gerhig Company's Miller 1, NE SW Section 16-18-10W, Webster Parish, eight miles southeast of the shallow Bellevue field, late last week was coring red beds at 3320 feet. The Woodbine is reported to have been entirely absent in this well and the Nacatosh and Blossom thin and far from pronounced. This well may be made a test of the lower Trinity.

Fossils in Oklahoma Asphalt Beds to Be Studied

Norman, Oklahoma.—Fossils which have been beautifully preserved for untold ages in an Oklahoma asphalt bed near Lorrance lake, four miles south of Sulphur, are now being studied under the direction of Dr. Carey Croneis of the University of Chicago, according to Dr. Chas. N. Gould, director of the Oklahoma geological survey. Dr. Croneis, who has received several hundred pounds of the fossiliferous asphalt, reports that the fossils will afford an interesting study.

While the specimens have been well preserved in the asphalt, the material in which they were preserved offers a problem to the collector. Most of the fossils are delicate shells of a small cephalopod, known as orthoceras, and the heavy, sticky asphaltic material is reluctant to let go of the evidence of animal life which it has so long preserved. Dr. Croneis has written that it almost impossible to separate the asphalt from the shells without breaking the shells, and for that reason he is trying to find some special method of loosening the asphalt.

Asphalt is among the best preservers of fossil remains, and many good collections have been secured from asphalt pits, particularly the large animal skeletons from La Brea, California. The shells from the Oklahoma asphalt have a pearly luster and when they can be taken from the asphalt without breaking form excellent specimens.

Cleaning pipe after first bead for finished weld

View of weld which met specifications of builders of the pipe line

Coupon cutting machine in position on pipe to cut coupon

Coupon hole, sample coupons and stencil mark

Painting welded joints behind firing line

General view along right of way, showing welded sections. Buckeye ditching machine in the distance

Pictorial Story of the Building of a Modern Pipe Line
(Continued from Page 53)

to hold up the near end of the pipe, two men at the back of it with lever, one collar mauler who pounded away on the steel while the joints were being screwed together, and three tong crews of four men each.

The threads had to be treated with paint, usually white or red lead, before leak-proof connections could be made. Part of the time thread protectors were used on the pipe in transit, when enough old cast-off couplings could be found; otherwise the joints would be stacked on the load so that the threads would not touch each other. But invariably a large percentage of threads were damaged before being placed into the line.

A good day's work for a crew of 18 men was 40 joints of 12-inch pipe screwed together and placed into a previously dug ditch, the lowering of pipe into the ditch as well as the making of connections between joints being done by hand. A com- with part of the crew placing the pipe in the ground ahead of the construction mendable record was achieved by a crew of 32 highly trained men who could lay 130 joints of six-inch line in nine hours, with part of the crew placing the pipe in the ground ahead of the construction gang, and four men followed and covering the pipe.

Pipe line building as described above was man-killing work. The collar maulers developed great skill and made an art of their labor, but the work of the village blacksmith was as play compared with theirs. And the generally accepted belief that work is conducive to long life most likely did not originate among men on pipe line tong crews. Their work was particularly hard, and they had to be men of iron to stay on the job.

While screw couplings are still in use to some extent, much of the killing work in connection with them has been eliminated. The ditches are dug by machines almost exclusively now, and the pipe is lifted and handled by improved winches and booms mounted on tractors. Furthermore, in many cases the joints are screwed together by machines. Thus hard manual labor is reduced to a minimum.

The above discussion had reference to screw lines, but the same progress pointed out in connection with their construction has also attended building of natural gas lines employing plain end pipe and couplings.

As early as 1916 welding of pipe lines was introduced, and welded lines are now rapidly taking the place of screw pipe for most purposes. Some of the largest oil pipe line companies, such as The Texas Pipe Line Company, and Gulf Pipe Line Company, are now using welded lines altogether. In natural gas lines, as well as in oil lines, welded joints are becoming common, although the rubber gasket joints are still used extensively. The welded connection has various advantages which are responsible for its present wide use. It is absolutely leak proof if prop-

Cleaning ends of sections before tying in

Cleaning pipe of loose paper and dope ahead of tie-in and dope gang, pipe having been coated and wrapped at mill. Note joint primed with Texaco liquid asphalt

Seminoles moving a section into place

After sections are lined up over ditch, the tie-in or bell hole weld is made. The "bell hole" is dug out for the welder to stand in while welding lower part of pipe in joining the sections together

Doping gang, dope wagon and kettle

Making over-bend on tie-in gang

Stiff-leg lowering pipe into ditch

erly made, and consequently reduces repair and replacement costs, besides eliminating interference with operation of the line and loss of time. Oxy-acetylene or "gas" welding was used exclusively at first. But recently the application of the electric arc welding process to pipe line construction was introduced, and it is now being used extensively.

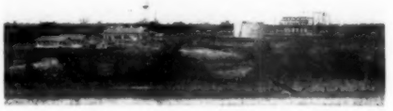
A little over two years ago the first arc welded pipe line was completed. It was a seven-inch natural gas line from Lampkin to Hodge, Louisiana. In the summer of 1929 The Texas Pipe Line Company completed its 692-mile trunk line from Lea County, New Mexico, to Port Arthur, Texas, all pipe in the line having been electrically welded. The Texas-Empire Pipe Line Company's long trunk line from Oklahoma to the Chicago district was the second long line all electrically welded. Electric welding is somewhat faster than gas welding. On a 12-inch, welded line, one welder with his helper can weld as many as 12 to 16 joints in a nine-hour day under favorable conditions. These figures are interesting in comparison with the above mentioned records that were possible in pipe line construction several years ago, when screw pipe was used and when the work was done largely by hand.

Better Pipe

Along with the improvements in methods of connecting and laying pipe, of digging and backfilling the pipe line ditches, there have been improvements in pipe manufacture and in construction and equipment of booster stations. Better pumps and better machinery are now available to meet the requirements of longer and larger lines.

In the surveying of pipe line routes over rough country use is now being made of aerial photography. Pipe line construction companies have solved many problems, and are now able to surmount practically any difficulty offered by desolate or arid region, stone mountain or swamp.

Meanwhile there has been extensive and exhaustive study of corrosion as existing in the pipe line business, and while much still remains to be learned on the subject, numerous experiments have been made and are still in progress, and the length of life of buried pipe has already been greatly increased. The practical application of mill coating represents one of the more recent successful innovations.



Completed motor-driven pipe line pump station

Buckeye back-filler in operation

Dressing up ditch behind back-filler

According to the head of one large pipe line company, the average cost per mile of pipe line construction is now probably a little higher than formerly, in spite of the extensive substitution of machine for man power; for although the machines offer economical service, there have been increases in other costs—for better pipe, better protective coatings, better pump stations. But even though the original costs may be somewhat higher, they are more than compensated for through longer life of the modern line, and through reduction of repair and replacement costs, loss of time, and interference with service.

Would Create Federal Gas Pipe Line Commission

Washington.—A bill introduced by Senator Capper (Kansas) would require a certificate of convenience and necessity from a proposed Federal Gas Pipe Line Commission before any corporation or person could engage in the purchase, production, distribution, sale or transportation of natural or artificial gas in interstate commerce. The bill would protect existing jurisdiction of state regulatory commissions by providing that the federal commission shall act only where state regulatory boards are without jurisdiction.

Following is the gist of a report prepared by the Committee on Service of Public Utility Companies of the National Association of Railroad and Utility Commissioners:

"During the past two years there has been a tremendous growth and extension of natural gas transmission and distribution in the United States. Mains have been constructed to carry gas almost unbelievable distances and this utility service is being made available in territory that only a few years ago had no hope of ever being served with this very desirable fuel. The enterprise and foresight of those responsible for this work is very commendable and they are to be congratulated for thus increasing the scope of availability of this service.

"Of course, much of the gas thus being transported is being carried in interstate commerce, and since the state has no control over the price at which the pipe line company sells the gas to the distributing companies this association urges congress to enact appropriate legislation for the regulation of such prices."

Oil Well Cementing Handbook

Owen Oil Well Cementing Company, Inc., Long Beach, California, announces the issuance of a 64-page handbook entitled "Oil Well Cementing."

It is referred to as an illustrated handbook for superintendents and engineers and describes the technique of oil well cementing as employed by this company with particular reference to the operations used in cementing water strings in deep wells. It incorporates a 45-page supplement presenting data relative to field cementing operations and is said to be of extreme interest to those connected with organizations actively engaged in development work.

This handbook will be sent to interested oil men anywhere upon request to the home office of Owen Oil Well Cementing Company at the above address.

OUTSTANDING EDITORIAL EFFORT

You can depend upon *The* OIL WEEKLY to do more than "just get out a paper."

Readers of *The* OIL WEEKLY no doubt have seen in the editorial pages of the paper evidences of careful planning in advance of each issue.

Such articles as those prepared by Mr. Logan on Northern Mexico, and various Gulf Coast fields; such articles as those by Messrs. King and Swindell on Hobbs as appeared last week; such articles as that by Mr. Reid in this week's issue on the world's largest re-pressuring system, are not "happenstances." They represent a great deal of work, work done on assignment, work done after planning by the editorial director in our home office.

In subsequent issues OIL WEEKLY readers will find regularly many more special articles which are not just "picked up," but which are the result of work and research.

Cleaning Rotary Mud

By GEO. L. MOREHEAD
Vice-President Link-Belt Company

CLEAN mud. The expression in itself seems almost contradictory. The layman can hardly associate mud as mud, with cleanliness, nor can he associate cleanliness with mud. However, to the man who operates a rotary drilling equipment in the oil field, the expression "Clean Mud" has a very definite meaning. In fact, to him it stands for that alluring thing that he has always wanted but seldom had on a drilling operation. Clean mud or cleaning mud is not synonymous with the painstaking operation that mother performed on Johnny's ears just before he started to school. What his kind mother peeled off and threw away is just the thing that the wise driller man wants to save.

Mud fluids have for years been used as a carrying medium to remove rotary drilling chips or cuttings from the bottom of the hole and bring them to the surface. These mud fluids have throughout these years served the driller well. At the same time they have been in a good many cases a source of annoyance almost to the point of exasperation. In more recent years where deeper drilling has been undertaken, through geological formations of a character which did not lend themselves to the making of a suitable mud fluid by simply mixing the material removed by drilling, with the rotary water, it has come to represent an expense item of material size.

Clean mud fluid, or clean mud, to the rotary operator means, for one thing, a mud that is free from rough cuttings or sand. These foreign particles when circulated through the mud system, work havoc with pump liners and valves, may plug up the drill bit, and if they are present in any considerable quantity, may stick the tools in the hole if circulation is through any cause interrupted.

In addition, when gas is present the mud becomes "gas cut," and unless the gas is removed from the mud before it is recirculated, the normal weight per gallon is reduced, and it becomes too light to be of further use, and must be thrown away or doctored up.

Again, on many locations available native muds do not make a mud fluid that is equal to the requirements or conditions under which the drilling operation is being carried on. In these cases other materials in the form of imported clays or compounds must be added to produce a mud fluid of desired weight and general characteristics. These materials add expense, and it therefore becomes more imperative that the mud be cleaned, instead of being discarded and thrown away.

In other words, separate the good from the bad—throw the bad away and use the good, keeping the good good by a continuous cleaning process.

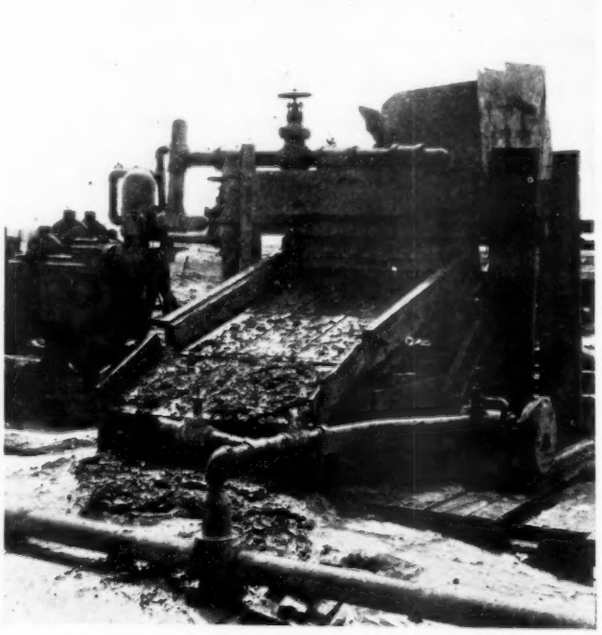
Link-Belt Company has recently introduced into the oil fields a mud cleaning device that is new to the oil industry but old to many other industries. It is a self-contained vibrating screen that has been in successful use on a commercial basis on many other materials for five or more years. This seems to be a case of teaching an old dog new tricks. In other words, an old and tried machine was given the new job of cleaning rotary mud, and it does it well. It removes the rough foreign particles down to a size that will be retained on a 30 to 40 mesh screen, and "degasses" the mud during the operation.

Simple Mechanism

The mechanism is extremely simple, both in construction and operation. It consists of a suitable screen deck carried in a suitable screen box, which screen box is in turn carried on four heavy springs of the flat clock spring type. The carrying springs are carried in spring boxes mounted on a steel subframe. A high frequency vibrating motion is imparted to the screen box and to the screen deck by means of a rotating shaft mounted directly underneath and attached to the screen box. The shaft is carried in dirt-sealed anti-friction bearings. Mounted on the rotary shaft are out-of-balance pulleys, which pulleys are so designed as to permit the varying of the intensity of the vibration by the use of selected sizes of counterweights that are furnished with the machine. The vibrator shaft is driven at about 1800 revolutions per minute through a multiple V-belt by either an electric motor or steam turbine.

The machine is set up in an inclined position at a convenient place outside of the derrick, and in such a manner that the mud fluid being discharged from the hole is delivered along the top edge of the screen. The good fluid passes through this screen into a trench through which it passes to the pump sump. The coarse rejects fall off the lower end of the screen into a reject pit, and the gas, if any is present, escapes into the air during the screening operation.

The illustration shows a Link-Belt vibrating screen used by Humble Oil & Refining Company in the Hobbs, New Mexico, field, for salvaging mud from old pits. At the time this photograph was taken, between $10,000 and $15,000 worth of mud had been salvaged through the screen. Notice the cuttings in the foreground, and how effectively the screen rids the old mud of foreign materials, thereby fitting it for economical re-use. When through on this location, the screen is to be moved to a new well, where it will re-condition mud direct from the hole.



Vibrating Screen salvaging mud from old pits

San Angelo, Texas. — A single order for prompt delivery on 35 87-foot steel pumping derricks has been placed by The California Company, production subsidiary of Standard Oil Company of California, with the Emsco Derrick & Equipment Company. These derricks will be used to replace wooden derricks now in service on the company's pumping leases in the Westbrook field, Mitchell County, where some of the first oil producing wells completed in West Texas are located.

STRAIGHT FACTS

THE FIRST OF A SERIES ON MATERIALS, MANUFACTURING PROCESSES AND FIELD SERVICE TESTS

Why Axelson Rod Stock is the Best Steel Mills Produce

AXELSON rod stock is manufactured in accordance with the best alloy steel mill practice. Exhaustive laboratory tests have always determined the source of this stock:

In chemical analysis the carbon range of the steel is never more than three points plus or minus from specification, whereas standard practice allows a ten-point range. Cast in corrugated ingot molds having hot tops, expansion and contraction is permitted without the danger of cracks developing. Hot tops eliminate pipes in the bloom. After pouring, the molds are not moved for two hours, allowing full time for the metal to solidify.

Ingots are re-heated in "soaking pits" before rolling, then reduced to 11"x12" bloom and sampled for analysis check. The blooms are then pickled and chipped for any defects, re-heated, rolled to 6"x6" billets by the same process, insuring the most uniform product. Axelson rod stock is rolled from the 6"x6" billet on a 12" mill, assuring a distinct grain refinement not possible to obtain in a smaller billet. In reducing the 6"x6" to ¾" bar, Axelson sucker rod steel actually passes through twenty-two sets of rolls, producing a much better grade of steel than if rolled from smaller billets passing through only eight or ten rolls. Two samples are taken from each ¾" bar after it comes from the 12" mill and are then checked for size, roundness and any surface seams. The rod is softened in the hot bed to comply with specified physical requirements. This also serves to relieve any internal stresses or strains induced by rolling or any contraction which has occurred in cooling.

Write for literature giving full details.

AXELSON MANUFACTURING CO., Ltd.
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FRICK-REID SUPPLY CORPORATION

AXELSON SUCKER RODS

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
LONG BEACH—		
James Oil Co., No. 5	900	7690
A. E. Mires, No. 1	500	7655
Young Pet. Co., Hilton 2	275	4644
PLAYA DEL REY—		
Del Oro Oil Co., Cain 1	400	6005
Gibraltar Oil Co., No. 1	750	4305
Thos. Kelly and Sons' Kelly-Prentiss 9	450	4575
Metropolitan Oil Co., No. 3	600	4400
Santa Catalina Oil Co., Aidline 1	250	4600
Twin Buttes Oil Co., No. 1	200	6190
Van Wig Oil Co., No. 1	400	4120
Venice Oil Syn., No. 7	1000	4515
RINCON—		
General Pet. Corp., Ferguson 2, (workover)	325	3580
VENTURA AVENUE—		
Associated Oil Co., Lloyd 53	500	7850
Shell Oil Co., Taylor 56	1100	7305

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BARTON COUNTY—		
Syndicate Oil Co. et al, Pierano 1, sw c ne 4-16-11e	*	3341
GREENWOOD COUNTY—		
Ritchey Drlg. Co., Dunlap 1, se sw ne 9-25-9e	25	2137
HARVEY COUNTY—		
The Texas Co., Zook 1, c ne sw 36-22-2w	*	3550
MARION COUNTY—		
Youker et al, Riffel 3, se c 10-17-4e	125	2333
McPHERSON COUNTY—		
Dixie Oil and Amerada, Flook 3, se c nw 1-20-2w	1055	2937
Shell Pet. Corp., Lewis 1, nw c se 30-19-1w	2420	3412
RICE COUNTY—		
Boucher Oil Co., Miller 1, se sw ne 7-21-10w	*	3417

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Lesh and McCall, Hooks 1 se nw sw 14-1s-3w	120	2485
Trevlyn Oil Co., Meeks 1, se sw sw 19-1s-2w	40	1797
COAL COUNTY—		
Mid-Western O&G, Gumm Bros. 1, c sw nw 30-3n-10e	*	2326
CREEK COUNTY—		
O. M. Irelan et al, Smith 3, csl sw se 11-17-10e	*	1990
C. G. Tibbens O&G, Wilson 1, nw c se 18-14-9e	60	1237
R. G. Jennings, Tiger 1, ne c nw se 36-15-7e	25	3298
Hill Bros., Berryhill 1, cwl nw se 28-17-12e	¶3½	1728
Gilcrease Oil Co., Berryhill 1, ne c nw ne 21-19-7e	12	2875
I.T.I.O., Hinton 2, se c nw sw 25-19-8e	40	2224
KINGFISHER COUNTY—		
Galt-Brown et al, Peck 1, c nw se 6-16-7w	*	7931
LOVE COUNTY—		
Henry Hobbs et al, Steele 1, sw c ne ne sw 20-6s-3w	*	3141
McINTOSH COUNTY—		
J. E. Weible, Mackey 1, nw c sw ne 3-11-17e	*	840
MUSKOGEE COUNTY—		
R. Kenworthy, Dodson 1-A, ne sw se 6-14-19e	*	905
Beland Oil Co., James 11, nw c se se 18-14-17e	100	1429
OKFUSKEE COUNTY—		
A. D. Morton, Grayson 3, cnl nw se 23-11-11e	10	2403

For Tabulation and Comparison See Market Section

Company, Well and Location	Initial Production Bbls.	Depth
OKLAHOMA COUNTY—		
I.T.I.O. et al, Unsell 4, ne nw ne 23-11-3w	5069	6265
I.T.I.O. et al, Lawrence Place 1, nw c ne 15-11-3w	20,075	6368
I. T. I. O. et al, Pasedena Heights 4, se sw se 14-11-3w	2460	6280
I.T.I.O. et al, Lemmon 1, se nw se 11-11-3w	250	6200
Hall and Briscoe, Holmes 7, nw c ne nw se 10-11-3w	7010	6290
Hall and Briscoe, Holmes 6, nw c se 10-11-3w	11,210	6325
Hall and Briscoe, Holmes 5, nw c sw se 10-11-3w	15,295	6365
British American Oil Co., Eckroat 1, nw c se se nw 10-11-3w	33,000	6381
Phillips Pet. Co., and Independent O&G, Ball 1, nw c ne sw se 3-11-3w	2225	6285
Wirt Franklin Pet. Corp., Shahan 2, sw c 2-11-3w	1450	6345
Phillips Pet. Co., Unruh 1, se c ne sw nw 2-11-3w	4790	6211
Phillips Pet. Co., Roden 1, se c nw sw nw 2-11-3w	12,370	6228
Kedburg Drlg. Co., Burss 1, ne c nw sw sw 2-11-3w	5335	6260
Hall and Briscoe, Lindsey 3, csl se sw nw 2-11-3w	43,785	6223
OKMULGEE COUNTY—		
R. Freeman, Brown 1, sw c nw 8-12-14e	*	2923
Babcock Bros., Harris 1, se c sw se nw 1-14-14e	*	1696
PITTSBURG COUNTY—		
M. J. Sullivan, Koehler 2, nw ne ne 15-7-18e	¶12½	1862
Apex Oil Co., Haskett 1, csl se nw 18-7-13e	*	1648
PONTOTOC COUNTY—		
Dixie Oil Co., Burk 1, sw se ne 32-5-5e	130	2535
SEMINOLE COUNTY—		
Pyramid Oil Co., Patterson 1, se c nw nw sw 17-7-8e	¶18½	3005
STEPHENS COUNTY—		
Morrison et al, Hightower 1, nw c sw ne 15-3s-5w	¶11	787
King Royalty Co., Taliaferro 9, se c sw sw 27-1s-8w	*	2064
WAGONER COUNTY—		
R. D. Jones, Oliver 1, c ne sw 3-16-15e	*	1250
G. Longacre et al, Harris 2, nw c sw sw ne 6-16-16e	*	1710
H. L. Jolly, Herrod 1-A, nw c sw ne 22-16-18e	*	918

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
Natural Gas Co. of W. Va., Clutter 1	¶1 50	....
Post 1	*	3456
GREENE COUNTY—		
Duquesne Gas Corp., Brant Bros. 1.	¶2	....
ALLEGHENY COUNTY—		
Howard, Harbison & Co., Halstead 1	¶¼	1725

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
WIRT COUNTY—		
Heck Oil Co., Price 1	*	2414
Wiser Oil Co., Vandale 1	*	2617
WETZEL COUNTY—		
Burton Development Co., Hoge 1	¶¼	2264
RITCHIE COUNTY—		
McClure Bros., Weakley 1	¶¼	....
TYLER COUNTY—		
Manufacturers Light & Heat Co., Woodburn 1300	*	....
GILMER COUNTY—		
Britton & Co., Law 1	¶¼	1952
MINGO COUNTY—		
United Fuel Gas Co., Central Trust Co. 4236	¶1¼	3435
HARRISON COUNTY—		
Reserve Gas Co., Thompson 2	1	3420
WOOD COUNTY—		
A. Broiskey, Dockins 2	3	....
FAYETTE COUNTY—		
G. L. Cabot, Inc., Newman 2	*	2924
Kanawha-Hocking Coal 5	¶¼	2436
KANAWHA COUNTY—		
G. L. Cabot, Inc., Bruin Hrs. 3	*	....
The Pure Oil Co., Federal Coal 49	¶¼	....
MARION COUNTY—		
Sutton Bros., Straight 2	¶1	3050
Victor Tennant, H. Shackleford 1	¶½	1970
ROANE COUNTY—		
Mountain State Gas Co., Morford 1	¶¼	1910
Van Oil & Gas Co., Vandervender 1.	¶¼	2069
United Fuel Gas Co., Simmons 4089.	¶¼	2026
CALHOUN COUNTY—		
Hope Natural Gas Co., Ryan 7510	¶¾	1759
Creed Baker, Stump 1	¶¼	2218
Southeast Gas Co., Morris 3	¶¼	2121

KENTUCKY

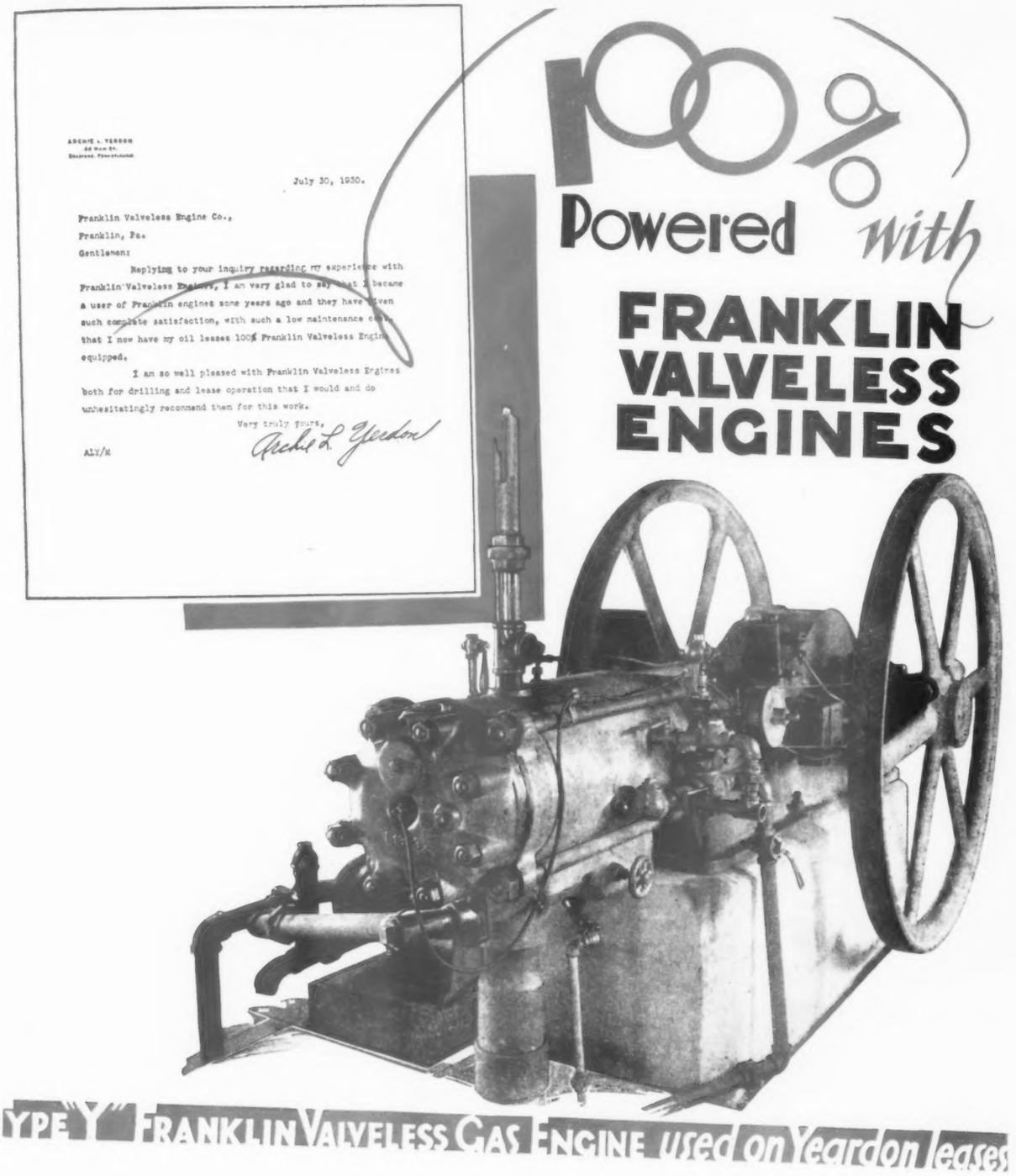
Company, Well and Location	Initial Production Bbls.	Depth
JOHNSON-MAGOFFIN COUNTIES—		
Cumberland Petroleum Co., Helton 1	*	....
Peoples Pittsburg Trust Co., Long 11	3	....
WAYNE COUNTY—		
Smith-Cameron Co., Bell 5	*	....
LEE-OWSLEY COUNTIES—		
Petroleum Exploration Co. 8	20	....
LOGAN COUNTY—		
A. Thornton & Co., Carather 1	*	1600
OHIO COUNTY—		
Hall & Garrison, Farmer 1	¶¾	....
Kentucky Natural Gas Co., Griffith 4	¶1	....
R. B. Rhodes, Brunerm 2	*	....
DAVIESS COUNTY—		
Melvin Root & Co., Thorp 1	50	....
Evans & Garrison, Magruder 1	*	....
Dr. L. C. Young, Turley 1	*	....
HART COUNTY—		
Wittmer Oil & Gas, Peyton 1	150	....
Unknown Company, Mrs. C. Smith 2	350	....
Lucy Edwards 1	300	....
Lucy Edwards 2	350	....
Alice Peyton 1	500	....
J. Gillocks 1	400	....
Green Hrs. 1	*	....
S. B. White 1	*	....
C. L. Bastine 1	*	....
Bales, Peyton, Clymer Co., W. E. Peyton 1	1400	....
Indiana Oil Syndicate, Whitlow 1	1000	....
Basters, Claypool & Co., Perkins 1	500	....
Fisher & Co., A. J. Edwards 1	150	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
NOBLE COUNTY—		
Local Oil Co., Spence 3	3	972
JEFFERSON COUNTY—		
Local Oil Syndicate, Carr 1	*	800
MORGAN COUNTY—		
McBride & Co., Taylor 1	*	1426
The Kemrow Co., Abel 4	¶¼	1460
Campbell & Long, Anderson 22	¶¼	1447

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
PERRY COUNTY—		
Miller Oil & Gas Co., Hoover 1	*	2860
Perry Sturm & Co., Harlan 1	¶½	3275
Ohio Fuel Gas Co., Rusler 2	¶1¼ 12	3156
MUSKINGUM COUNTY—		
Fetty & Louchey, Russell 2	¶½	642
Ohio Fuel Gas Co., Watson 1	*	4334
MEDINA COUNTY—		
Oko Oil & Gas Co., McVickers 25	5	476
C. B. Wood, Wood 2	3	465
ATHENS COUNTY—		
Abe Snider & Co., Jackson 1	¶¼	3241
Frank O'Mara & Co., Nelsonville Lumber Tr. 1	*	3281



Archie L. Yeardon
60 Main St.
Bradford, Pennsylvania

July 30, 1930.

Franklin Valveless Engine Co.,
Franklin, Pa.
Gentlemen:

Replying to your inquiry regarding my experience with Franklin Valveless Engines, I am very glad to say that I became a user of Franklin engines some years ago and they have given such complete satisfaction, with such a low maintenance cost that I now have my oil leases 100% Franklin Valveless Engine equipped.

I am so well pleased with Franklin Valveless Engines both for drilling and lease operation that I would and do unhesitatingly recommend them for this work.

Very truly yours,
Archie L. Yeardon

ALY/M

100% Powered with FRANKLIN VALVELESS ENGINES

TYPE "Y" FRANKLIN VALVELESS GAS ENGINE used on Yeardon leases

Franklin Valveless Engine Company

Franklin, Pennsylvania

Distributed by **OIL WELL SUPPLY COMPANY**

Company, Well and Location	Initial Production Bbls.	Depth
LORAIN COUNTY—		
Dillon & McFredericks, Mills 2	¶1	2670
Elyria Steel & Tube Co., Huene 1	*	....
ASHLAND COUNTY—		
Robinson & Co., Bird 4	*	630
BELMONT COUNTY—		
John Jeffieries & Co., Fee 1	¶½	1914
WAYNE COUNTY—		
Harmon & George, Howman 2	¶¼	3058
FAIRFIELD COUNTY—		
City Natural Gas Works, Mertz 3	*	2410
LICKING COUNTY—		
Emerald Petroleum Co., Fowels 1	*	600
NORTHWESTERN OHIO		
HARDIN COUNTY—		
Pleasant Oil & Gas Co., Burnison 3	¶¾	1343
INDIANA		
GIBSON COUNTY—		
Texana Oil Co., Riley 1	*	1600
MICHIGAN		
ISABELLA COUNTY—		
Ohio Producing & Refg. Co., Epple 3	210	....
Weidman 3	*	3480
The Pure Oil Co., Roebuck 3	150	....
Leonard Oil & Gas Co., Wezenski 1	30	3667
ARKANSAS		
UNION COUNTY (Champagnolle)—		
Ohio Oil Co., W. R. Crain 10, 1-17-14	10	3010
NORTHERN LOUISIANA		
BOSSIER PARISH (Elm Grove)—		
Palmer Corp., Johnson 1, 24-17-12	¶1¼	1750
CADDO PARISH (Vivian)—		
Bayou State Oil Corp., Barr 6, 30-22-15	8	1126
OUACHITA PARISH (Monroe)—		
La. G&F Co., Fee 4, 2-19-3e	¶4½	2181
RICHLAND PARISH—		
State Line O&G Co., Boughton A-1 33-16-6e	¶1¾	2446
SABINE PARISH (Zwolle)—		
Wheatcroft et al, Sabine 1, 31-8-12	*	2520
SABINE PARISH (Pleasant Hill)—		
F. A. Bartlett, Logan 1, 27-10-12.	¶1 25	2959
LOUISIANA GULF COAST		
BLACK BAYOU—		
Freeport Sulphur Co., Yount-Lee 5	*	1553
EAST HACKBERRY—		
Yount-Lee Oil Co., Kelso Bayou 40	1100	2908
EVANGELINE—		
Fred I. Getty, Getty 12	5	1860
SULPHUR—		
Union Sulphur Co., Fee 764	*	4280
VINTON—		
Wilson-Broach, Wilson 5	680	3150
Garbet Oil Co., Lyons 1	*	3520
TEXAS		
TEXAS GULF COAST		
CEDAR BAYOU—		
Sloan Prospecting Co., Wasoba 1	*	5559
BARBERS HILL—		
Humphreys Corp., Winfree 1	550	5511
HANKAMER—		
Gulf Prod. Co., Boyt 10	910	3920
DEER PARK—		
W. C. Turnbow et al, Miller 1	*	6354
HULL—		
Republic Prod. Co., Dolbear 23	*	2580
LOST LAKE—		
Pure Oil Co., Mayes 12	480	2773
MOSS BLUFF—		
Humble O&R Co., Hylton 1	*	6590
ORANGE—		
Brownie-Babbette Oil Co., Peveto 1	75	3110
PIERCE JUNCTION—		
Rio Bravo Oil Co., Settegast 20-A	*	4750
Navarro Oil Co., Dooley 20	100	4850
Bob Smith, Parsons 4	550	3800
Kipley Oil Co., Prudential Inv. Co. 1	750	3850
RACCOON BEND—		
H. R. Flannigan, Deutrich 1	¶30	975
SPINDLE TOP—		
Yount-Lee Oil Co., McFadden 117	800	4800
CENTRAL EAST TEXAS		
VAN ZANDT COUNTY—		
Pure Oil Co., O. L. & L. L. Swain 3	7500	2951
Ella York 2	6000	2937
SOUTH TEXAS		
BASTROP COUNTY—		
Humble, Jones 1	*	1493
DUVAL COUNTY—		
Magnolia Pet. Co., Edge-Hahl 1	*	4982
Benavides 4	¶5	2862
NUECES COUNTY—		
Moody-Seagraves Prod. Co., Smith 1	¶20	4100
Kepley Prod. Co., Donigan 1	¶25	2425
REFUGIO COUNTY—		
Moody-Seagraves Carlysle 1 (blk 2)	360	6466
J. B. F. Heard 1-C	200	6467
L. L. Smith, Rodgers 2	600	3637
STARR COUNTY—		
The Texas Co., Guerra 5-A	¶10	3641
ZAPATA COUNTY—		
F. M. Blair and Son, Guitierrez 1	*	1750
O. W. Killam, Slator 2	*	2135
ZAVALLA COUNTY—		
Ed Anglin, Matthews 2	*	912
TEXAS PANHANDLE		
CARSON COUNTY—		
Plains Holding Co., J. C. McConnell 3	¶47	2700
GRAY COUNTY—		
The Texas Co., Williams 8	¶2-150	2665
HUTCHINSON COUNTY—		
W. H. Holmes et al, J. L. Moore 3	150	3100
Texas Interstate P. L. Co., Lee Bivins (Sec. 91) 1	¶13½	2625
MOORE COUNTY—		
North American O&G Co., Lee Bivins 1	¶34	2803
NORTH TEXAS		
ARCHER COUNTY—		
Carter & Wright, Wilson 2	*	1081
Continental Oil Co., Falls County 1	30	1095
Maer & Martin, Andrews 1	*	955
Geo. L. Pace et al, Arnold 3	*	860
W. C. Young et al, Taylor 2-C	35	1747
THROCKMORTON COUNTY—		
Knox et al, Reynolds 1	¶¼	519
States Oil Corp., Davidson 1	*	1324
Woodley Pet. Co., Pogue 1	*	1331
WICHITA COUNTY—		
Pat Flynn et al, Woodward 1-B	40	874
WILBARGER COUNTY—		
The Texas Co., Waggoner 390	8	532
NORTH YOUNG COUNTY—		
Belknap Coal Co., Fee 6	*	706
Brazelton Bros. et al, Grubbs 1	*	455
Bullington & King Roy. Co., Graham 9	860	710
Graham 10	300	710
F. E. Butler et al, Finch 3	30	703
P. K. Deats et al, Furr 1	*	802
Jacobs O&G Co., Finch 2	50	662
Finch 3	20	690
W. H. Kerbow et al, McCord 1	*	662
Petroleum Producers Co., Graham 10	400	705
W. M. Shrivner et al, Stewart 1	*	852
Smith & Shamblin et al, Belknap 1	*	704
W. R. Stafford et al, Dossett-Watson 1	*	535
Stastny et al, Eichelberger 1	*	891
Swanson et al, Routin 1	*	890
Ungren & Frazier, Anderson 1	*	705
Willis et al, Kirkland 2	715	713
SOUTH YOUNG COUNTY—		
Hamilton et al, Johnson (Sec. 714) 1	*	725
Henderson Oil Co., McNeil 1	*	3132
CENTRAL WEST TEXAS		
COLEMAN COUNTY—		
Ewmo Oil Corp., Stearns 1	*	1108
Forster Bros., Sharp 1	5	1157
Joines et al, Turner 2	*	2030
Permian Oil Co. et al, Overall 1	*	2568
EASTLAND COUNTY—		
Lobaugh et al, Kimbrough 1	*	1582
Mook-Texas Oil Co., Henderson 1	¶4	865
Southern Oil & Prod. Co. et al, Martin 1	¶2	3469
HOOD COUNTY—		
Standard Oil Co. of Texas, Cogdell 1	*	2510
PALO PINTO COUNTY—		
T. P. Coal & Oil Co., E. V. Robinson 1-C	¶1½	4295
Wickens et al, Jones 1	¶2¼	3206
STEPHENS COUNTY—		
Outlaw et al, Langford 1	*	2205
WEST TEXAS		
HOWARD COUNTY—		
Greene Prod. Co. & Getty Pet. Corp., Snyder 1	*	3500
McGinley-Sigler Corp., Hyman 1-B	*	2851
PECOS COUNTY—		
Cardinal Oil Co., Tippett-Shell 3-F	30	400
ECTOR COUNTY—		
Landreth Prod. Co., University 5-T	230	3612
REAGAN COUNTY—		
Big Lake Oil Co., University 5-C	¶24-1275	8718
WARD COUNTY—		
Alpine Oil & Dev. Co., Boogher 2	70	2200
Black & Massey, E. R. Allen 1	35	2240
NEW MEXICO		
EDDY COUNTY—		
R. D. Compton et al, Vandergriff 1, (Sec. 33-19s-30e)	*	2002
Geo. F. Getty Oil Co., Dooley 6	100	1353
Lockhart et al, Livingston 1	*	3225

Wildcatting Activities in Los Angeles Basin

Los Angeles.—A gradual shift in wildcatting activities in the Los Angeles basin has been observed during the past few weeks, with efforts to find field extensions and the trend toward drilling about midway between fields taking precedence over theories that structures entirely out of line may prove productive. The major companies have been more cautious in the selection of wildcat locations than the smaller companies, but even the larger operators took long chances during the more prosperous times.

The Texas Company started work on its test about two miles west of the Montebello field, Section 4-2-12. Other wells have been drilled nearby, but most of these were abandoned at normal depths.

George F. Getty is drilling at 3700 feet in Sunny Side Heights 1, a wildcat test about one and one-half miles northwest of the Athens-Rosecrans field and also in line with the Potrero field, a short distance to the northwest.

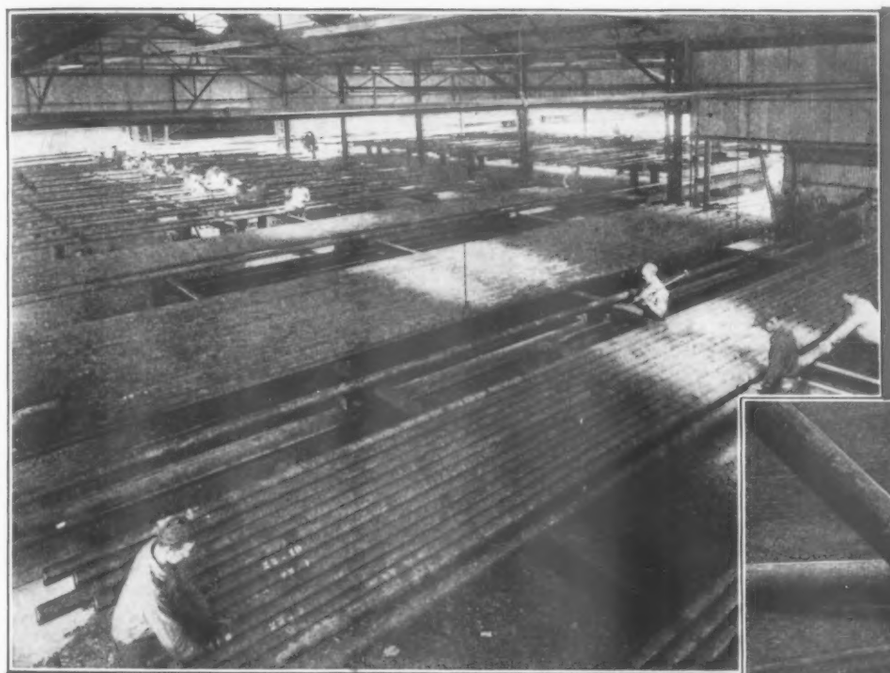
The Texas Company is drilling at 1000 feet in Olive Community 1, near Olive and a short distance south of the Richfield field.

Standard Oil Company is trying for deep production in the old Newport field, which barely produced oil in commercial quantities at its very best. This well has reached a depth of 3225 feet.

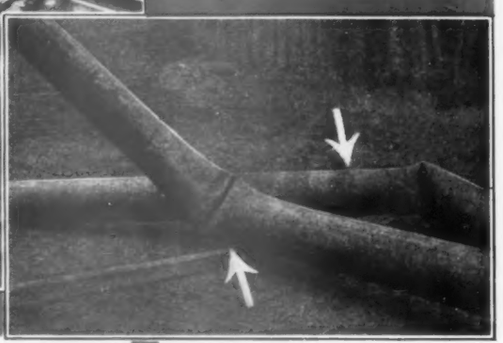
Malloy and Company to Move from Tulsa

El Dorado, Ark.—Malloy and Company is planning to move headquarters here from Tulsa. Malloy and Company are successors of the old Constantine Company, one of the pioneers in Union County, Arkansas.

J. M. Garrett has blocked approximately 600 acres centering in Section 6-18-13, Urbana district, Union County, and is planning a 3100-foot test.



At left—One of the buildings devoted to the welding of double length line pipe, 44 to 50 feet long.



Chester Double Lengths Never Leak and Never Break Under Severest Tests

These pieces welded in double lengths were subjected to the following extreme tests:

The pieces were dropped several times from height of railroad car upon a rail. These tests in no way fractured or injured the weld.

The pieces were then anchored near the gas weld and a chain attached to a locomotive was secured near the end of the pipe. The locomotive pulled the pipe, distorting it as shown in the photograph near the weld as indicated by arrow. The weld remained intact and gave no indication of failure.

No double length pipe can be stronger than Chester Double Length Pipe. The field test of the long 10-inch line from which these pieces were selected at random did not develop a single leak in the weld.

The careful inspection, crushing tests and final hydrostatic test after welding into double lengths insure 100% satisfaction in service.

Chester also makes all classes of genuine Wrought Iron Tubular Goods and Copper Bearing Steel Pipe.

South Chester Tube Company
Chester, Pa.

CHESTER
STEEL SPECIALISTS IN CASING FOR DEEP WELL DRILLING **CASING**
LINE PIPE

District Sales Managers:

W. E. GIBSON, 801 Columbia Bank Bldg., Pittsburgh, Pa.

H. A. MORSE, 30 Church St., New York City, N. Y.

J. P. COONEY, 715-716 A. G. Bartlett Bldg., Los Angeles, Calif.

J. P. STEELE, 305 Petroleum Bldg., Ft. Worth, Texas.

District Offices:

J. D. SWARTZ—1231 So. Evanston St., Tulsa, Okla.

E. L. MOSELEY—2218 Mills St., Houston, Texas.

District Warehouses: Houston, Texas; Thenard, Calif.; San Francisco, Calif.

Distributors:

UNITED PIPE & SUPPLY CO., Charleston, W. Va.; Danville, W. Va.; West Hamlin, W. Va.; Paintsville, Ky.; Ashland, Ky.; Allen. Ky.; Prestonburg, Ky.

PRICHARD SUPPLY CO., Mannington, W. Va.; Mather & Waynesburg, Pa.

LeVALLEY, McLEOD, KINKAID CO., INC., Elmira and Olean, N. Y.

PELICAN WELL TOOL & SUPPLY CO., Shreveport, La.

UNITED OIL WELL SUPPLY CO., 712 A. G. Bartlett Bldg., Los Angeles, Calif.

GREAT NORTHERN TOOL & SUPPLY CO., Billings & Kevin, Mont.; Kemmerer and Cody, Wyo.

PERMITS GRANTED FOR NEW WELLS

CALIFORNIA

LONG BEACH—Davis Investment So., No. 18, 29-4-12.
RINCON—Needham 2, 7-3-24.
VENTURA—Shell Oil Co., Taylor 65, 29-3-23.

KANSAS

GREENWOOD COUNTY—Simmons et al, Inthurm 2, sw se se 19-22-12e.
MORRIS COUNTY—Loomis et al, Jentis 1, (owd) cnl ne se, 16-16-7e.
RICE COUNTY—Ashby et al, Miller 1, se sw ne 3-21-6w.
STEVENS COUNTY—Texas Interstate Pipe Line Co. et al, Kelly 1, se c nw 16-34-38w.

OKLAHOMA

CADDO COUNTY—Mid-Kansas O&G and Ramsey Pet. Co., Culp 6, nw c ne 6-5n-9w.
CARTER COUNTY—Magnolia Pet. Co., Carter 3, nw se sw 14-1s-3w.
CREEK COUNTY—Wilcox O&G and Whitten, Balker 1A, cel nw nw 14-17-10e. Krasne Drlg. Co., Harry 2A, se c sw se 4-17-11e.
GARFIELD COUNTY—Continental Oil Co., Looman 1, (owd) ne c se 9-20-4w.
HUGHES COUNTY—Boettcher O&G, Walker 1, c nw sw 11-7-8e.
MUSKOGEE COUNTY—Robinson Oil Co., Brown 1, se c ne 18-13-16e. W. J. Metzger, McDaniel 3, nw c se se 6-14-19e. J. M. Foltz et al, Woodall 2A, csl nw sw 20-15-16e.
NOBLE COUNTY—Magnolia Pet. Co., Summer 2, nw c se 4-20-1w.
OKLAHOMA COUNTY—I.T.I.O., Earp 1, ne c 22-11-3w. Riddle et al, Giles 1, ne c sw 14-11-3w. I.T.I.O., Pasadena Heights 6, sw c 14-11-3w. I.T.I.O., Ferndale Community 6, nw se ne 11-11-3w. Anderson-Prichard Oil Corp. and Hall & Briscoe, Payne Community 1, nw e sw se 3-11-3w.
OKMULGEE COUNTY — Mack Drlg. Co., Cumsey 3, sw c se se 36-13-13e. F. Hyer, Barnett 7, se c ne ne nw 2-15-14e (owdd).
PITTSBURG COUNTY—J. Morrison, Touler 1, c ne se 13-7-17e. Rogers et al, Hendrickson 1, sw ne se 8-7-18e.
STEPHENS COUNTY—George Pace et al, Watkins 7, nw c ne se se 21-2s-7w.

TEXAS

ARCHER COUNTY — Bridwell Oil Co., Wichita Falls, F. C. Green, A, 200, 3, J. Levins sur, 4181 ft from s and 1925 ft from w line of survey. Geo. L. Pace, Wichita Falls, C. S. Arnold, 320, 2, J. Levins sur, 1985 ft from w and 150 ft from s line. Golding & Cochran, Wichita Falls, G. A. Lauster, 120, 3, S 2, S.P. Ry sur, 750 ft from s and w lines. E. B. Madden, Olney, H. T. Richardson, 80, 1, J. Scott sur, 150 ft from e and 450 ft from s line Blk 22. Deep Oil Dev. Co., Wichita Falls, L. W. McCrory, 40, 1, B 76, Amer. Trib. sur, 330 ft from s and w lines.

ANDERSON COUNTY—Humble O&R Co., Houston, J. F. Roberts, 100, 3, D. Roberts sur, 1665 ft from w and 243 ft from s line.

AUSTIN COUNTY—F & M Drilling Co., Houston, F. Dietrich, 40, 1, T. Bell sur, 225 ft from n and e lines.

BEE COUNTY — Union Producing Co., Houston, G. A. Ray, 640, 26, T. Hanson sur, 2025 ft from w and 700 ft from s line.

CALAHAN COUNTY — Humble O&R Co., Cisco, J. F. Dyer, 80, 1, S 22, E. T. Ry sur. J. F. Whiteley, Baird, Finley, 80, 1, S 13 D&D Asy. sur, 400 ft from s and w lines.

CALDWELL COUNTY—Jos. Bruner, San Antonio, C. Malone, 30, 1, A. Floyd sur, 150 ft from n and 300 ft from w line.

CASS COUNTY—Jno. C. Rogers, Linden, W. Q. Henderson, 369, 1, Wm. Davis sur, 3132 ft from n and w lines.

EL PASO COUNTY—Tri-State Oil Co., El Paso, Bobadilla, 1, S 254, B 82, S. F. sur, center of se¼.

For Tabulation and Comparison See Market Section

FISHER COUNTY — Roeser & Pendleton, Inc., Fort Worth, W. M. Gribble, 200, 1, S 210, B 1, BBB&C sur, 440 ft from w and 660 ft from s line nw¼.

HARDIN COUNTY — Pearce & Proctor, Houston, Russell, 40, 1, Turnbow sur, center.

HARRIS COUNTY—Ship Channel Oil Corp., Houston, Jones, 19, 1, H. Whiting sur, 50 ft from s and e line; 2, 292 ft ne of No. 1.

HOOD COUNTY — A. G. McLaren, Fort Worth, F. Leck, 1000, 1, T. Robinson sur, sw corner.

HOWARD COUNTY—Continental & Group I Oil Corp., Texon, S. T. Eason, 150, 2, S 6, B 32, T&P sur, 130 ft from n and w lines of sec.

JACK COUNTY—Ascot Company, Wichita Falls, S. E. Maxey, A, 60, 1, S 1, S.P. Ry. sur, 1050 ft from e and 450 ft from n line.

JEFFERSON COUNTY—Yount-Lee Oil Co., Beaumont, McFaddin, 145, P. Humphrey sur, 2485 ft from w and 2528 ft from n line Lot 29.

REFUGIO COUNTY — Union Prod. Co., Houston, J. J. O'Brien, 100, 5, Refugio sur, 150 ft from e and 1300 ft from s line; J. J. O'Brien, 200, 8, Refugio sur, 150 ft from n and w lines. Houston Oil Co., Houston, W. J. Heard, 400, 13, Refugio sur, 150 ft from se and sw lines; Rooke, 14, T. Mullen sur, ne corner; M. H. Ryals, 4, Refugio sur, 150 ft from n and 267 ft from e line. Houston Gulf Gas Co., Houston, N. J. Ryals, 25, 6, Refugio sur, 150 ft from s and e lines.

SHACKLEFORD COUNTY—J. L. Douglas et al, Moran, E. Webb, 11, 2, S 1, Blind Asy. sur, 300 ft sw of No. 1.

THROCKMORTON COUNTY — Woodley Pet. Co., Abilene, F. S. Moore, 320, 3, 1607, TE&L sur, 300 ft from w and 150 ft from n line of sec.

WARD COUNTY—Gulf Prod. Co., Houston, G. W. O'Brien, 640, 16, S 17, B F, 330 ft from n and 990 ft from e line se¼. Prairie O&G Co., Ranger, G. Hill, 80, 1, S 30, B 29, School sur, 330 ft from n and e lines of sec. California Co., Midland, S. R. Allen, 640, 1, S 30, B 34, H&TC sur, 2310 ft from ne and 330 ft from se line sec.

WICHITA COUNTY—C. C. Julian Oil & Royalty Co., Wichita Falls, W. W. Overby, 86, 13, J. Sharp sur, 200 ft from n and 150 ft from w line. R. R. Clark et al, Wichita Falls, J. F. Bickley, 400, 12, S 2, C&M sur, 900 ft from n and 450 ft from e line. Shappell Oil Co., Wichita Falls, C. W. Wallace, 83, 4, B 76, WVFL sur, 150 ft from s and w line or ne¼. Tedford Bros., Wichita Falls, J. H. Bentley, 108, 2, P. Corrigan sur, 350 ft from e and 450 ft from s line.

WEBB COUNTY—Magnolia Pet. Co., Dallas, J. B. Peal, 250, 1, C. Los Angeles sur, 900 ft from sw and 330 ft from se line. O. W. Killam, Laredo, E. Garcia, 320, 4, S 608, B 11, 680 ft e of center of w line Blk 11.

YOUNG COUNTY — W. F. Hamilton, Wichita Falls, N. Finch, 3, 40, TE&L sur, 150 ft from n and 450 ft from e line n½ sw¼. Petroleum Prod. Co., Wichita Falls, E. Rogers, 220, 1, 197, TE&L sur, 150 ft w of center of e line of survey. Belknap Coal Co., Wichita Falls, Fee, 53, 4, 22, TE&L sur, 300 ft e of No. 3; Fee, 53, 6, 150 ft from n and w lines; 5, 40 ft from w and 420 ft from s line. R. N. Hamilton, Wichita Falls, G. C. Rochell, 100, 1, W. R. Peveler sur, 450 ft from e and 1200 ft from n line. Petroleum Prod. Co., Wichita Falls, C. Graham, 48, 8, 2249, TE&L sur, 300 ft w of No. 6; 10, 450 ft from n and 485 ft from w line; 9, 150 ft from n and 48 5ft from w line. S. S. Staley, Wichita Falls, W. H. Meador, 80, 1, 1500, TE&L sur, 150 ft from e and 1900 ft from s line sec. W. F. Brazleton et al, Olney, G. W. Grubbs, 40, 1, 300, TE&L sur, 483 ft from n and 783 ft from e line sec. Texas Co., Wichita Falls, N. Finch, B, 120, 3, 40, TE&L sur, 300 ft s of No. 1. W. R. Stafford et al, Graham, W. A. Dossett, 1, 1927, TE&L sur, 150 ft from s and w lines. Ungren & Frazier, Putnam, L. L. Anderson, 60, 1, 269, TE&L sur, 150 ft from n and 309 ft from e line. S. W. Stauffer, Oklahoma City, J. R. Wilson, 45, 1, 153, TE&L sur, 150 ft from w and 1050 ft from s line. F. W. Boardman et al, Wichita Falls, J. J. Perkins, 40, 1, 6, TE&L sur, 450 ft from n and 150 ft from e line. King Royalty Co., Wichita Falls, J. Graham, 40, 10, 2249, TE&L sur, 1557 ft from e and 355 ft from n line. G. A. Alexander, Jr., Wichita Falls, R. B. Ward, 55, 1, 279, TE&L sur, 150 ft from s and e lines; S. R. Jeffery, 80, 1e, 46, TE&L sur, 150 ft from n and e lines of sw¼. W. H. Morrison, Wichita Falls, Jeffery, 40, 1, 58, TE&L sur, 750 ft from w and 150 ft from s line. Panhandle Refg. Co., Wichita Falls, C. E. Steele, 100, 1, I. Ry. sur, 1600 ft from n and 257 ft from e line.

ZAPATA COUNTY—O. W. Killam, Laredo, R. Cuellar, 363, 37C, S 278, 1775 ft from w and 150 ft from n line; E. Cuellar, 431, 36B, S 277, 1630 ft from w and 150 ft from s line. J. K. Gibble, Laredo, I. G. Trevino, 40, 1, S 65, B 3, 150 ft from s and e lines; 2, 300 ft nw of No. 1; 3, 300 ft sw of No. 1.

LOUISIANA

CALCASIEU PARISH—Union Sulphur Co., Sulphur, Martha Moss 2, 8-10s-9w, 120 ft s and 56 ft w ne cor of se¼ nw¼ of sec. Wilson Broach Co., Beaumont, Texas, Strip 7, 33-10s-12w, 250 ft w and 379 ft e sw cor se¼ ne¼ of sec.

SABINE PARISH—Loring Oil Co., Many, Bowman-Hicks 15, 2-7n-12w, 330 ft n and w ne cor nw¼ se¼ of sec. R. L. Gay, Tr., Zwolle, Sabine Lbr. Co. A-2, 1-7n-12w, 330 ft n and e center of nw¼ of sec. H. W. Perritt, Tr., Shreveport, Bowman-Hicks 3, 2-7n-12w, 224 ft se and 122 ft e nw cor se¼ sw¼ of sec. H. W. Perritt, Tr., Shreveport, Bowman-Hicks 2, 2-7n-12w, 260 ft s and 100 ft e nw cor se¼ ne¼ of sec. The Texas Co., Shreveport, Stille 2, 3-7n-11w, 910 ft w and 320 ft s ne cor nw¼ of sec.

ST. LANDRY PARISH — The Texas Co., Shreveport, Botany Bay Lbr. Co. 9, 4-6s-5e, 8658 ft southerly along w line of T.T. Co. Botany Bay, Tr. from nw cor on Bayou Courtableau and 50 ft easterly at a rt angle.

UNION PARISH—Ouachita Nat. G&O Co., Inc., Monroe, Smith 1, 36-20n-2e, 660 ft s and 1220 ft w ne cor of sec.

WEBSTER PARISH — Red Hawk Oil Co., Inc., Shreveport, Mrs. L. S. Mathews 1, 11-23n-9w, 200 ft n and e from center of sec.

ABBREVIATIONS

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WILDCATS FROM ALL SECTIONS

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
SMITH COUNTY—		
Sun Oil Co., Oscar McGehee 1....	*	3842

ANDERSON COUNTY — Frost Oil Co.'s Bottin 1, A. B. Patton sur, elev 354 ft, Pecan chalk 2934-3158 ft, dr 3470 ft. Humble O&R Co.'s J. W. McCaffrey 1, I&GN Ry Sur. A.418, elev 365 ft, Pecan chalk 2875-3163 ft, Austin chalk 4041-4382 ft, Woodbine sand 4562-4664 ft, dr 5150 ft.

BOWIE COUNTY—Lee Timberlake et al's Tidwell 2, L. M. Rice sur, elev 290 ft, top Nacatosh sand 710 ft, sd 720 ft. Joe Burnham et al's G. W. Burnett 1, M. H. Janes sur, top chalk 2906 ft, sd 3150 ft. Maud Redwater Oil Co.'s Merritt 1, Y. S. McKinney sur, sd 635 ft.

CASS COUNTY—Wesley Morse et al's Henderson 1, C. C. Bailey sur, dk. Phillips Pet. Co.'s J. R. Olds 1, J. A. Stephenson sur, elev 245 ft, dr 4045 ft. Olds-Smith et al's Joe Athenay 1, J. C. Byers sur, sp and sd. John C. Rogers et al's Henderson 1, Wm. Davis sur, rig; Lanier 1, K. A. Welborn sur, elev 366 ft, top Annona chalk 2144 ft, sd 2275 ft.

CHEROKEE COUNTY—Arcadia Ref. Co. & Bude's Jones Gin Lot 1, Edson Gee sur, elev 481 ft, dr 2800 ft. D. Harold Byrd et al's Farriss 2, rig.

DELTA COUNTY—D. S. Hoad et al's J. J. Baker 1, T. P. Eddin sur, sd 1275 ft. Worthington & Stedham's W. H. Dejernett 1, E. Chick sur, sd 966 ft.

ELLIS COUNTY — Foster & Richardson's Moise-Cerf 1, 2187 ft. E. M. Rogers et al's J. L. Winn 1, O. Wheeler sur, sd 1360 ft.

FANNIN COUNTY—Ed. V. Parsons et al's Morgan 1, J. E. English sur, elev 668 ft, sd 3501 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, sd 1735 ft.

GREGG COUNTY—W. T. Daniel & Mrs. Mamie Hammonds' Hamby 1, John Lout sur, elev 376 ft, top Saratoga chalk 2361 ft, sd 2590 ft. W. A. Moncrief-J. E. Farrell & Arkansas Fuel Oil Co.'s F. K. Lathrop 1, Wm. Robinson sur, elev 401 ft, Pecan chalk 2458-2795 ft, dr shale and shells 3115 ft.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, Arron York sur, elev 397 ft, Pecan chalk 2810-3015 ft, sd 3800 ft. E. L. Chapman et al's Cade Bros 3, J. B. Dorsey sur, sd 3125 ft. Texas-State Oil Co.-R. H. Dearing et al's T. H. Skinner 1, J. Hinshaw sur, elev 453 ft, Pecan chalk 2500-2603 ft, Austin chalk 3559-3977 ft, coring sand and shale 4550 ft.

LAMAR COUNTY—K. O. Bundy-Everett & Allen's G. S. Legate 1, J. V. Cheney sur, dk.

LEON COUNTY—Sun Oil Co.'s Mrs. Ella Grayson 1, Sec. 36, Conception sur, materials.

LIMESTONE COUNTY — Imperator Oil Corp. et al's B. B. Barron 1, E. Mabry sur, sd 1274 ft. Geo. B. McCamey et al's Kosse Townsite 1-A, sd 1515 ft. E. E. O'Byrne & E. L. Chapman's S. W. Hancock 1, H. York sur, sd 1165 ft. Ben Segal-Earnest Hundahl et al's A. E. Smith 1, M. N. Miller sur, sp and sd. A. M. Yost-Schuebert & Bill Reiter's S. J. Fenner 1, H. C. Hoskins sur, dr 2630 ft.

NAVARRO COUNTY—L. G. Priest et al's H. Albritton 1, Bazette area, top chalk 2276 ft, sd 2595 ft.

RED RIVER COUNTY—D. M. Buffington et al's L. H. Moore 1, D. Cornelius sur, Annona chalk 3 to 241 ft, sd 1070 ft. E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, sd 1505 ft. Droppleman & Bundy's J. W. Cunningham 1, S. V. Chi sur, dr 1625 ft. Johnson Pet. Co.'s Style 1, Dean sur, sd 2215 ft. Echols & Peters' E. Howison 1, W. Humphries sur, lcn.

RUSK COUNTY—J. Alford et al's Wallace-Thrash 1, R. H. Pinney sur, dk. W. D. Anderson-Williamson County Properties' Daisy Bradford (40-ac) 1, elev 396 ft, top Pecan chalk 2500 ft, testing prod at 3526-36 ft, td 3592 ft; Thompson (78-ac) 1, M. J. Prue sur, materials. Ed. W. Bateman et al's Lou D. Crim 1, E. Sevier sur, A-69, elev 403 ft, Pecan chalk 2608-3014 ft, Austin chalk 3480-3552 ft, flowed rate 900 bbls 38.3 gravity oil per hour and 5,000,000 ft gas at 3640-50 ft, and sd storage. Nick Barbare et al's J. T. Brown (36.-ac) 1, M. J. Prue sur, dk. Burgoyne Bros. et al's J. A. Alexander (93-ac) 1, T. Jones sur, rig. Capps & Smith's J. L. Cochran 1, J. Roth sur, lcn. E. L. Chapman et al's A. P. Finney (20-ac) 1, dk. Deep Rock Oil Co.'s Mayfield Alford (30.2-ac) dr 130 ft. Dan Dillon et al's Frederick (19½-ac) 1, dk. Geo. Fagg et al's Camp (5-ac) 1, rig. Frank Files (Meredith & O'Mara's) Robertson (14-ac) 1, R. H. Pinney sur, rig. Frank Foster-Deep Rock & Wainwright-West Oils, Ltd.'s, Camp (7½-ac) 1, dr 610 ft. Frank Foster & Jeffries' Mayfield-Alford (9-ac) 1, dr 295 ft. Haynes Drlg Co.'s J. T. Brown (40-ac) 1, M. J. Prue sur, rig. H. L. Hunt et al's C. D. Ashby 1, dr 2450 ft; Daisy Bradford (17-ac) 1, elev 391 ft, top Pecan chalk 2332 and hard chalk 2500 ft, flowing via tubing from sand 3542-96 ft, td 3650 ft. Laster Oil Co.'s D. Bradford (lot No. 14) 1, rig. Lide et al's Calvin Young (40-ac) 1, M. J. Prue sur, dr 1820 ft. Tex Lloyd et al's Camp (5-ac) 1, elev 408 ft, cem cas 3525 ft, cored oil sand and testing at 3541-52 ft. J. K. Lewis & Goodman's O. C. Jones (15-ac) 1, elev 507 ft, top Pecan chalk 2420 ft, dr 2740 ft. Patton & Harrell's Frederick 1, lcn. Rusco Oil Co.'s D. Bradford (Lot No. 13) 1, rig. United Producers Co.-W. T. Knight & Shaw's Mayfield Alford 1, dk. Wainwright-West Oils, Ltd.'s, Moore 1, materials. Nat Sadler et al's W. C. McElroy (45-ac) 1, Abner Nail sur, lcn. Jack Younger & Hill's Daisy Bradford (5-ac) 1, dk.

SMITH COUNTY—Owen-Sloan Oil Co. & R. H. Davis' J. H. Starnes 1, J. W. Allen sur, elev 417 ft, Pecan chalk 2738-3052 ft, top Austin chalk 3771 ft, fsh in water sand 4235 ft. T. B. Slick & J. G. Kugle, Jr., et al's M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 2980-3275 ft, sd 3685 ft. Sun's McGehee 1, dry and abn in Pecan chalk 3760-3842 ft. Thayer & Rogers' Dr. Willingham 1, Jacob Herrin sur, sd 2000 ft.

UPSHUR COUNTY — McGinley Corp.'s Reeves-Truitt 1, L. B. Brown sur, rig.

VAN ZANDT COUNTY—Warren T. Daniel et al's Cumbie 1, John Wright sur, elev 457 ft, Pecan chalk 1690-1730 ft, sd 2275 ft. J. C. Fore & Geo. L. Pace's P. S. Hand 1, Wm. Sherman sur, Pecan chalk 2420-44 ft, top Austin chalk 3452 ft, dr shale 4470 ft. Hart Pet. Co.'s M. L. Cox 1, A. C. Nugent sur, sp and sd. Kelly O&G Co.'s Lunsford 1, J. Conner sur, A-151, sd 1860 ft. Neil McElroy et al's R. W. Murphy 1, H. Bailey sur, sd 2700 ft. Van Oil Assn.'s J. C. Tankersley 1, L. Landers sur, sd 1030 ft. Wittmer O&G Properties et al's R. W. Beggs 1, H. W. Raquett sur, rig.

VAN FIELD—Cranfield & Germany's Swain (5-ac strip) 1, sp and sd. F. & M. Drlg. Co.'s F. R. Flanigan (1-ac strip) 1, M. Gross sur, lcn. Hartt Pet. Co.'s Swain (2-ac strip) 1, sp and sd. Helms et al's C. E. Bogue 1, Marshall University 1, elev 461 ft, coring 2840 ft. Humble O&R Co.'s R. S. Blake 7, elev 484.8 ft, Pecan chalk 1755-1940 ft, Austin chalk 2241-2321 ft, dr 2380 ft; L. V. Freeman 2, cem cas 309 ft. Pure Oil Co.'s A. D. Clark (36-ac) 6, dr dr 2418 ft; Clark 7, cem cas 2680 ft; R. C. Crim (30-ac) 2, top Pecan chalk 1772 ft, cem cas 2875 ft; Davis 1, dk; Wylie Enos (30.6-ac) 1, Pecan chalk 1657-1735 ft, cem cas 2858 ft; R. A. Howell (47-ac) 3, dr 2340 ft; J. M. Martin (113⅓-ac) 1, cem cas 2776 ft; W. F. Swain (40-ac) 2, shut in 2924 ft; A. G. Tunnell (50.ac) 2, top Pecan chalk 1704 ft, dr 2700 ft; Wells 5, dk. Sun Oil Co.'s I. W. Thompson 3, dr 2276 ft. Roy Stumpff et al's L. K. Riggs (3-ac strip) 1, elev 455 ft, dk. Vantex Oil Co.'s L. A. Smith (2-ac) 1, dk.

WOOD COUNTY—Wood County Dev. Co.'s Ricks 1, D. Fuller sur, sd 1000 ft.

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WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
TOM GREEN COUNTY—		
Mintex Oil Co., Campbell 1.....	*	1994
MENARD COUNTY—		
J. C. Barnett et al, Callan 3.....	*	2124
REAGAN COUNTY—		
T. B. Slick Estate et al, August 1..	*	3146
TAYLOR COUNTY—		
Herring-Hucony Gas Co et al, Richie 1	*	3000

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, top salt 1720 ft, dr 2200 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, dr 2585 ft.

COCHRAN COUNTY—Continental Oil Co.'s Slaughter 1-B, League No. 134, materials. Penn Oil Co. & Kiskadden's Slaughter 1, lcn.

COKE COUNTY—Reid-Hitchens & Stanolind O&G Co.'s Duncan 1, materials.

CONCHO COUNTY—Beesley et al's Waring 1, abn lcn. A. W. Turner-Cromwell & Wesner's Brosig 1, sd 1520 ft.

CRANE COUNTY — Continental Oil Co.'s Cowden 1-C, top salt 690 ft, trace oil 1890 ft, dr 2145 ft. Cranfill Bros. Oil Co.'s J. T. Muir 1, elev 2499 ft, top salt 485 ft, top white lime 2330 ft, fsh tools 3930 ft. Cranfill & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, spraying oil and gas, dr by junk 4472 ft, td 4488 ft.

CROCKETT COUNTY—J. W. Dieringer et al's G. Barnscorew 1, elev 2519 ft, top salt 955 ft, dr 2190 ft. Taylor-Link Oil Co.'s M. Bullock 1, top salt 1090 ft, sd 2300 ft.

CULBERSON COUNTY—Cranfill Bros. Oil Co. et al's Mrs. J. P. Seay 1, dr 130 ft. Grisham & Hunter Corp.'s Warren 2, sd 1520 ft. W. L. Kornrumpf et al's Garren 1, sd 1180 ft.

DAWSON COUNTY—R. A. Albaugh et al's John Robinson 1, spd and sd.

ECTOR COUNTY—Southern Crude Oil Pur. Co.'s Cowden 2, top anhydrite 1805 ft, dr 1810 ft. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, top salt 865 ft, sd 3280 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Holman 2, dr 6810 ft.

EL PASO COUNTY — Tri-State Oil Co.'s Mrs. Louis Bobadella 1, materials.

FISHER COUNTY — Condor Pet. Co. & Humble O&R Co.'s Wilson 1, elev 1879 ft, dr 2810 ft. Cranfill & Reynolds Co.'s Flannigan 2, sd 3130 ft; Willingham 3, sd 3090 ft. Roeser-Pendleton & Amerada's Ribble 1, rig; Littleton 1, dr 960 ft. The Texas Co.'s Stephens 2-A, elev 1936 ft, dr 3200 ft; M. Teagarden 2-B, elev 1870 ft, dr 3035 ft.

GARZA COUNTY—Penny & Porsey's J. D. Justice 1, lcn.

GAINES COUNTY—Texas Consolidated Oil Co & T. P. Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, dr 730 ft.

GLASSCOCK COUNTY—FHE Oil Co. et al's J. W. Meek 1, top salt 1120 ft, top lime 2675 ft, flowing water with trace oil, dr 3025 ft.

TOM GREEN COUNTY—Cromwell et al (was Belding & Dutton's) Norsworthy 1, sd 765 ft. Phillips Pet. Co. et al's Jennings-Gul-

den 1, elev 2016 ft, sd 5010 ft. Pratt & Hancock's Lewis 2, sd 200 ft.

HOWARD COUNTY—Continental Oil Co.'s Eason 2, dr 970 ft.

HUDSPETH COUNTY—G. R. Theison et al's University 1, sp and sd.

IRION COUNTY—Central Oil Co. (W. E. Newton's) H. Horney 2, sd 1300 ft. Stanolind O&G Co.'s W. H. Williams 1, dr 230 ft. Straughn & Texannati Oil Co.'s Tankersley 1, elev 2306 ft, sd 1480 ft. F. E. Webb et al's Williams 1, elev 2363 ft, sp and sd.

JONES COUNTY—J. B. Jameson et al's S. W. King 1, dr 280 ft. C. C. Julian & Gulf Prod. Co.'s Williams 1, rig. McBest et al's Roberts 1, sd 1000 ft. Shaheen Oil Co. & Duffy's King 1, sd 1500 ft. Shaheen & Union Oil Co.'s B. King 1, materials. Union Oil Co.'s Hedrick 1, est 80 bbls pumper at 1969-71 ft. Sam Yingling et al's L. R. Cade 1, sd 2310 ft.

LOVING COUNTY—The California Co.'s Reagan McIlvain 6, top salt 740 ft, dr cem plug 4073 ft; Reagan 7, top salt 780 ft, dr 1470 ft. Carl Cromwell & Atlantic's Russell 1, top salt 750 ft, dr 2260 ft. Eppenauer Drlg. Co. et al's Allen 2, rig. Henshaw et al's Reagan 2, rig. Lewis & Slagel Drlg. Co.'s Cartwright 1, set cas 382 ft. C. H. Lockhart et al's F. W. Hubbard 1, rig. Lockhart & Co.'s Allen 4, top salt 724 ft, dr 2710 ft. Miller-Burge & Healy's Chapman 1, top salt 750 ft, top Delaware 4285 ft, made second head of 200 bbls oil 4356 ft and to run 7-inch cas. H. W. Martin et al's Jim Wheat 1, lcn; Wheat-Ramsey 1, rig. Rush-Anderson & Moor's Wheat 1, dk.

MENARD COUNTY—L. G. Priest et al's Sorrell 1, elev 2279 ft, dr 2624 ft.

MITCHELL COUNTY—Lewis-Slagel Drlg. Co.'s A. M. Bell 1, elev 2278 ft, top lime 1700 ft, sd for shot 2827 ft.

PECOS COUNTY—J. R. Bell et al's H. J. Eaton 1, elev 2425 ft, top salt 825 ft, dr 1600 ft; Eaton-Sun 1, dr 310 ft. J. R. Bell & Humble O&R Co.'s Scharff-Blackman 1, elev 2426 ft, top salt 940 ft, co after two shots 1600-24 ft. Charlesworth-Messenger Oil Co.'s Butz 1, elev 2519 ft, sd making gas 1282-90 ft. E. L. Chapman et al's Streety 1, elev 2563 ft, sd 2210 ft. Cosby Prod & Roy. Corp.'s Cordova 1, temp abn with hfw 3015 ft. C. L. Dittman Drlg. Co. et al's Eaton 2, lcn; Eaton (Sec. 37) 1, elev 2433 ft, top salt 945 ft, dr 1245 ft; Jackson 1, machine. Humble O&R Co.'s H. L. Kokernot 1, elev 3593 ft, top salt 2713 ft, top black lime 3981 ft, reaming hole to fsh for tools, td 6170 ft. Magnolia Pet. Co.'s H. J. Eaton 1, machine. B. C. Mann et al's Scharff-Blackman 1, top salt 675 ft, dr 1015 ft. McCarty Oil Co.'s Gray 3, making oil, cas collapsed 1437 ft. J. R. Miller et al's Bennett 1, dr 1735 ft. J. D. O'Mara et al's Bennett 1, elev 2508 ft, sd 1230 ft. Penn Oil Co. et al's J. B. Alvis 1, dr 445 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, fsh 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, top Delaware 4265 ft, sd 5000 ft. Rio Grande Oil Co.'s H. D. Webb 1, top lime 2717 ft, dr 3030 ft. Riser & White's Riser 1, sd 500 ft. Eric Schelling & Slaughter's Yates 1, sd 340 ft. Sides & Cloyd's Blackstone-Slaughter 1, sd hfw 3405 ft. Southern Crude Oil Pur. Co.'s Scharff-Blackman 1, top salt 865 ft, ¼ mil ft gas 1658-60 ft, trace oil 1660-79 ft, dr lime 1855 ft. Williams & Moran's Heiner-State 1, elev 2528 ft, dr 1470 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 179, sd 4003 ft; University 5-C, comp. flowing 1275 bbls 53 gravity oil and 23,592,000 ft gas at 8718 ft; University 6-C, lcn. Group One Oil Corp.'s University 4-B, cored broken lime 8110-40 ft.

REEVES COUNTY — The California Co.'s Kloh 2, cem 19 ft 20-inch cas at 29 ft.

RUNNELS COUNTY—Chas. Dutton et al's G. W. Dean 1, dr 2205 ft.

SCHLEICHER COUNTY—Delmar Oil Co.'s O'Harrow 1, elev 2421 ft, dr 5740 ft. Eastland Oil Co. Unit Plan's Tisdale 1, sp. Munger-Wilson Oil Co.'s Page 1, elev 2270 ft, sd 5053 ft. Paul Teas & Walter Gant's Allison 1, elev 2311 ft, sd 3960 ft. J. D. Wesner et al's R. E. Ratliff 1, sd 750 ft.

SCURRY COUNTY — Camp Springs O&R Co.'s Strayhorn 1, sd 875 ft. R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, sd 5000 ft. Scurry County Oil Exchange's C. H. Earnest 1, cellar. Seifert & Dibble's Blackburn 1, top salt 720 ft, sd 1702 ft.

STERLING COUNTY—W. C. Beesley et al's W. L. Foster 1, elev 2518 ft, co 540 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 3, rig. Eastland Oil Co. et al's Hunter 2, elev 1874 ft, pb from 2750 to 2398 ft. Geo. Goodrum et al's L. Ackers 1, lcn. Herring et al's Richie 1, abn 3000 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, trace oil in lime 1834-1901 ft, ur cas, td 1995 ft. Sanger O&R Co.'s Osborn 1, rig.

TERRELL COUNTY—Big Bend Oil Corp. et al's Bassett 1, elev 2396 ft, sd 2670 ft. Mid-Kansas O&G Co.'s Goode 1, elev 2405 ft, tested 66,618 ft sweet gas in sandy-lime 5305 ft, dr shale 5415 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 6780 ft. Phantom Oil Co.'s Ingram 1, sd 3035 ft.

UPTON COUNTY—Bennett Oil Co. (R. H. Gill's) Shirk 1, top salt 1260 ft, show oil 2406 ft, dr 2445 ft. C. F. Corzelius et al's Shirk-Tidal 1, dr 160 ft. C. C. Duffy et al's McClinitc 3, top salt 1100 ft, dr 1405 ft. Eppenauer Drlg. Co. et al's Chaney 5, top salt 710 ft, dr 2415 ft. Gulf Prod. Co.'s McElroy 90, dr 2000 ft; J. H. Shirk 1, top salt 1045 ft, top lime 2462 ft, swabbed 25 bbls 28 deg. oil 3 hrs at 2545-2605 ft. Humble O&R Co.'s Damron 1, top salt 1230 ft, cem cas 2871 ft; Ricker 15, top salt 525 ft, dr 1185 ft. Penn Oil Co. & Shell Pet. Corp.'s Halamack 1, dr 1230 ft. TP Coal & Oil Co.'s King 1, top salt 1150 ft, sd 2345 ft. Weekly Oil Corp et al's McClintiv 1, top salt 1090 ft. dr 2855 ft; Shirk 1, elev 3086 ft, top salt 1025 ft, top lime 2495 ft, testing lime 2645-60 ft.

WARD COUNTY—California Co. & Atlantic Oil Prod Co.'s S. R. Allen 1, top salt 2296 ft, dr 2505 ft. Empire Gas & Fuel Co.'s Sealy 1, top salt 1175 ft, fsh tools iwth 3 mil ft gas 2517-30 ft. Grand Falls Oil Co.'s Blair-Boogher 1, top salt 765 ft, fsh tools with 1450 ft oil in hole at 2135-2210 ft. Gulf Prod. Co.'s Hutchings 6, dr 2045 ft; O'Brien 16, dr 75 ft. J. G. Kugle et al's Chas. Wallis 1, dr 1095 ft. Magnolia Pet. Co.'s Atlantic-Sealy 1, dr 215 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, sd 1200 ft. Prairie O&G Co.'s G. P. Hill 1, rig. Rector Oil Co.'s Boogher 1, top salt 790 ft, co and est 25 bbls at 2150-2230 ft. Rickford & Smith's Johnson 1, top salt 798 ft, dr 835 ft. Paul Ryan et al's E. R. Allen 1, machine. Shipley Oil Corp.'s Monroe 1-A, elev 2655 ft, top salt 2485 ft, fsh 3780 ft. TP Coal & Oil Co.'s H. James 1, top anhydrite 740 ft, top salt 1015 ft, dr with show oil and gas 2310 ft.

WINKLER COUNTY—Magnolia Pet. Co.'s M. J. Bashara 1, top anhydrite 829 ft, top salt 996 ft, dr 1735 ft; J. B. Walton 1, dr 100 ft.

SOUTH TEXAS

ATASCOSA COUNTY—Lloyd Bender et al's Duderstadt 1, (nw corner of county), sd 2280 ft in Edwards lime.

BASTROP COUNTY—Humble's Jones 1, (J. A. Navarro sur), reported abn 1493 ft in serpentine. Bolling et al's McWilliams 1, (Glasscock sur), sd 2240 ft. Pacific O&G Co.'s Lytton 1, sd 2520 ft.

BEXAR COUNTY — Penn-Tex O&G Co.'s Dobrowolski 4 (Dobrowolski pool), to make location. F. W. Tong's Willie Sandemer 1 (John Montez sur), sd at 1170 ft at last report, insufficient showing reported in 700-ft horizon to make producer.

BEE COUNTY — Grayburg Oil Co. and Mauldin's Kimbal 1 (500 ft s of discovery well on 40-acre tract out of original 189-acre tract, seven miles sw Pettus production), lcn. Simms Oil Co.'s Holzmark 2, plugged back to 3568 ft from 4218 ft, working on well. Moody-Seagraves Producing Company & Independent O&G Co.'s Waelder 1 (8 miles se Beeville), dr below 4821 ft.

BLANCO COUNTY—Lyles and Anderson's Standford 1, sd about 600 ft. Forest Oil Co.'s Hornberger 1, dr around 445 ft.

CALDWELL COUNTY—Blount and Mills' McMahon 1 (Pinchback sur), still fsh at 2160 ft, showing some oil.

DE WITT COUNTY — Shell Pet. Corp.'s Fritz Junkers 1 (taken over from Penn), dr around 5300 ft.

DUVAL COUNTY—Lefevre and Buchanan's Waelder-Wood 1 (8 miles ne Schoolfield-O'Byrne pool), td 1530 ft, showing considerable oil and water while bailing. Vacuum Oil Co.'s Duval County Ranch Co. 1 (sur 28), dr 2015 ft. Magnolia Pet. Co.'s Wilson 1 (sur 136), dr 1985 ft; Edge-Hahl 1 (sur 63), reported abn at 4982 ft. Gulf Prod. Co.'s Schaeffer 1 (sur 32), dr 1212 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Hollman 2 (sec 215), dr around 6725 ft at last report.

FRIO COUNTY—United North and South Dev. Co.'s Little 2 (near Medina County line), attempting to complete at 1640 ft, casing set at 1600 ft. Wray et al's Burns 1 (Antone Hutzler sur), temp sd at 3708 ft, may set casing to test showing of oil in Edwards lime, topped at 3660 ft.

GONZALES COUNTY—United North and South Dev. Co.'s Wesslls 2, dr 3485 ft.

JACKSON COUNTY—Trinity Drillers' Hungerford 1 (2 miles e of Edna gas field), dk up, prep to sp in.

LAVACA COUNTY—Cranfill and Reynolds' Hermes 1 (150 ft from ne and se lines of most easterly ne corner of William Ryan sur), lcn.

LIVE OAK COUNTY—Houston Oil Co.'s Booth 1-A, plugged back to 5263 ft; Cartwright 22, dr 5820 ft. Jacobs et al's Key 1, dr 2215 ft. Tul-Tex's Jacobs 1, dr 4278 ft.

NUECES COUNTY—Bowers et al's Pryor 1 (stevens sur), sd around 400 ft. Callalen Oil Co.'s 2 (Farrias sur), sd 2100 ft. Grimm and Yakey's Bauer 1, dr at 2122 ft. Moody-Seagraves Prod. Co.'s Smith 1, prod about 20,000,000 ft gas at 4100 ft, 1800 lbs rock pressure. Hale and Hall's Poenisch 1, sd at last report. Houston Oil Co.'s Hunter 1 (J. Dunn sur), dr below 4100 ft. Kepley Prod. Co.'s Donigan 1, prod 25,000,000 cu ft gas at 2425 ft. Saxet O&G Co.'s State Nat. Bank 1, plugging back to 2400 ft, sand from 5515 ft. H. H. Weinert's Mohle 1, sd 452 ft.

REAL COUNTY — L. L. Evans and associates' Olds 1 (sec 15, blk D, HE&WT sur), dk up. McGinley Oil Corp.'s Habey 1 (sw quarter of sec 175, AB&M sur, No. 17), setting casing at 425 ft.

SAN PATRICIO COUNTY — Cosden Oil Co.'s Powell 1 (1 mile e of Oden), dr stem reported stuck, td 4590 ft; Ramsey 1, sd at 809 ft, set surface cas. LaFeria O&G Co.'s Smith 1, sd 4190 ft. Peterman et al's Crow 1, sd about 4100 ft. Saxet Oil Co.'s Carroll 1, rigging up, no later report.

STARR COUNTY — Kush and Duerkson's Kelsey-Bass 1, dr 700 ft. Kenyard et al's Sealbury 1, set casing at 349 ft, woc. Los Olmos Oil Co.'s Kelsey-Bass 1, sd 271 ft. The Texas Co.'s Guerra 5-A, prod 10,000,000 cubic ft gas with 750 lbs rock pressure at 3641 ft.

UVALDE COUNTY — Phantom Oil Co.'s Claudt 1, sd at 2710 ft. Waldrup and Welch's Benson 1, sd 1620 ft.

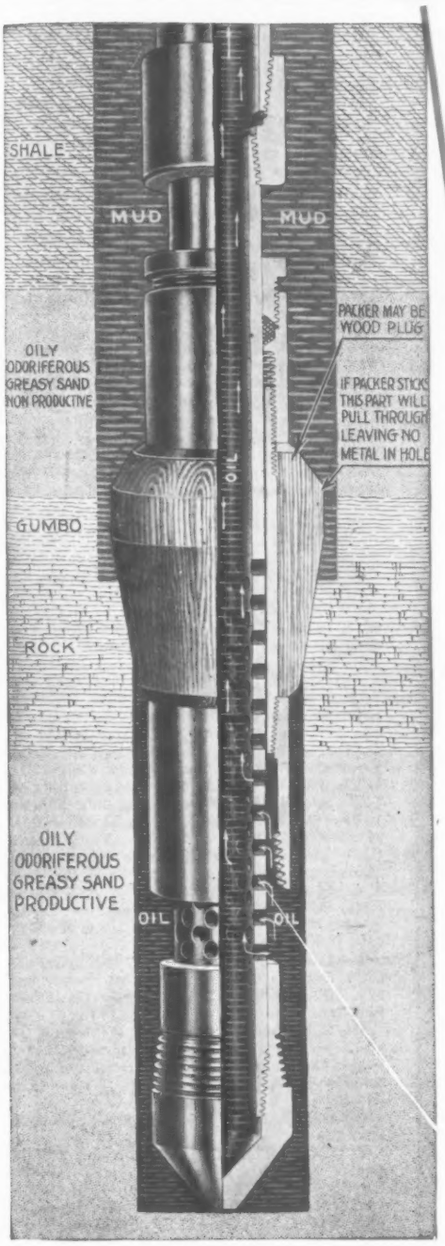
VICTORIA COUNTY—Atlee Drilling Co.'s West 1 (3 miles ne Nursery), sd 1820 ft.

WEBB COUNTY — Usher Carson et al's Benavides 1 (sur 1613), dr 612 ft. O. W. Killam's Bruni 1 (sur 77), dr 2756 ft.

WILSON COUNTY — Rycade Oil Corp.'s Johnson 1 (J. M. Balmaseta sur), dr 1560 ft in shale. Stover and Wren's Reuss 1 (Trevino sur), dr about 1575 ft.

ZAPATA COUNTY—F. M. Blair and Son's Gutierrez 6 (Comitas Grant), reported abn 1750 ft. O. W. Killam's Slator 2, reported abn at 2135 ft; Slator 3, rigging up. R. C. Hinnant's Gutierrez 1, dr about 1445 ft. Mackenzie and Talmadge's 1, dr about 400 ft. W. M. Marks' Flores 1, dr 1310 ft. Neilson and Courtney's Luther 2 (formerly National Oil Co.), ru. B. F. Nixon's Gutierrez 1, sd at 50 ft, to resume dr. J. J. O'Hern's Benavides 2 (Carta Blanco ranch, Willa Grant), lcn. Penny Prod. Co.'s Cuellar 1, sd at 1867 ft.

KNOW your sand *before* setting casing



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LOUISIANA GULF COAST

ACADIA PARISH — Yount-Lee Oil Co.'s Houssiere Latrielle 9, Evangeline, fsh 8650 ft.

ASSUMPTION PARISH—Texas Gulf Sulphur Co.'s Dugas & LeBlanc 4, Napoleonville, gbo 410 ft; Dugas & LeBlanc 5, Napoleonville, sn 270 ft.

AVOYELLES PARISH — M. L. Vincent's Morrow 1, shut down 4220 ft.

CALCASIEU PARISH — Wilfred Lahay's Jardell 1, 2 mi ne Vinton, water sn 2300 ft. J. O. Davis' Lumber Co. 1, 8 mi n Starks Dome, sd 6550 ft. Union Sulphur Co.'s Moss 1, Lockport, set 4½-in cas 6610 ft. Dr. Thomas et al's Hewitt 1, 2 mi ne Edgerly, lcn. Crawford Doyle, Tr.'s Johnson 1, nw flank Starks dome, sd 370 ft.

CAMERON PARISH—Pure Oil Co.'s Yount-Lee 10, Sweet Lake, gbo and lime 4400 ft. Shell Pet. Co.'s Watkins 16, Black Bayou, gbo 1800 ft; Black Bayou State 2, ru. Freeport Sulphur Co.'s Yount-Lee 6, Black Bayou, gypsum 940 ft. The Texas Co.'s Calcasieu Lake State A-6, Calcasieu Lake, filling cavity; Calcasieu Lake State 7, lcn. R. E. Seiss, Tr.'s Vincent 2, Hackberry, sd 500 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 10, Jefferson Island, rock 1056 ft. The Texas Co.'s Vermilion Bay 6, Vermilion Bay, ru.

IBERVILLE PARISH—Gulf Ref. Co.'s Gay 1, Bayou Choctau, coring sn 3020 ft. Standard's Wilbert 8, Bayou Des Glaise, sn 3800 ft; Wilbert 7, Bayou Blue, dk fdn; L. Baist 1, Bayou Blue, dk fdn; Schwing 1, Bayou Blue, sn and strong odor oil 4865 ft; Schwing 3, Bayou Blue, prep to test open hole 2980 ft. Shell Pet. Co.'s Wilbert 5, White Castle, dry gas showed on test, awaiting orders. Texas Gulf Sulphur Co.'s Wilbert 6, Bayou Choctau, dredging canal; Wilbert 7, li 520 ft.

JEFFERSON PARISH—H. T. McClain et al's Trumbell Atterbury 1, Welsh, 2530 ft in gbo.

PLAQUEMINES PARISH—Gulf Ref. Co.'s Buras Levee B-2, Rose Dome, gbo 520 ft. Humble O&R Co.'s Cockrell-Moran 2, Lake Grand Ecaille, sd 3220 ft. The Texas Co.'s Garden Island Bay 4, Garden Island, gbo 4380 ft; Garden Island 5, lcn.

ST. JAMES PARISH—Convent Oil Co.'s Jacobs 1, fsh 1830 ft.

ST. LANDRY PARISH—Gulf Ref. Co.'s Haskins 4-A, Port Barre, ru.

ST. MARTIN PARISH—Harrison-Abercrombie's Barras 1-A, ru. The Texas Co.'s Iberville 3, Hager Dome, ru; St. Martin Land Co. 5, Hager Dome, sh 2710 ft. Rycade Oil Co.'s Woodyard Lake 1, Bayou Bouillon, sdtr at 4630 ft. State 4, Bayou Bouillon, fsh 4475 ft.

ST. TAMMANY PARISH—Washington & St. Tammany Dr. Co.'s Coussack 2, mixing mud 1560 ft.

TERREBONNE PARISH — Chas. Paggi's Evergreen 2, Houma, sd 1800 ft. La. Gas & Fuel Co.'s Minor Estate 1, Houma, sd 3245 ft. The Texas Co.'s Bay Junop 2, fsh 6830 ft; Caillou Island 4, lcn; Lake Pelto 4, dk; Lake Pelto 5, lcn; Lake Pelto 6, sd 1350 ft; Bay St. Elain 5, bailing at 1020 ft; Bay St. Elaine 6, lcn; Bay St. Elaine 1, w.o.r.; Lake Barre 6, lcn; Lake Barre 7, reaming at 2590 ft; Lake Barre 8, set 20-in cas 125 ft.

WEST FELICIANA PARISH — Putnam Synd.'s Como Plantation 1, sn and gumbo 850 ft.

VERMILION PARISH—Pure Oil Co.'s La. Land Co. 1, set 18⅝-in cas 125 ft.

TEXAS GULF COAST

AUSTIN COUNTY—Ark. Nat. Gas Co.'s Machemehl 1, 2½ mi n Bellville, set 10-in cas 1060 ft. O'Hara et al's Schrader 1, sh 2835 ft. Empire G&F Co.'s Kunze 1, San Felipe, sh 5365 ft.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi n Nash Dome, coring 5430 ft. Steele & Strickland's Lochridge 1, Lochridge, sd 50 ft. Rycade Oil Co.'s Wisdom 27, Nash Dome, rock 5360 ft. Rycade & Amerada's Seaburn 2, Stratton Ridge, water sn 5400 ft. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, dr plug 4140 ft. The Texas Co.'s Ewing 1, Manvel, fsh 7580 ft. The Texas Co.'s Murdock 1, Fresno, gbo 7310 ft. Layne et al's Wisdom 7-A, li 2720 ft. Mills Bennett Prod. Co.'s Randon 2, sh 2090 ft; Reese 2, anhydrite 2500 ft. United Oil Synd.'s Speer 1, 3 mi west Danbury sd 570 ft.

CHAMBERS COUNTY—Pure Oil Co.'s Lost Lake 5, Lost Lake, cemt cavity; Mayes 12, Lost Lake, comp for 480 bbls oil at 2770 ft. Shell Pet. Co.'s Herff 2, Moss Bluff, sn 6025 ft. Chicago Oil Corp.'s Lawrence 1, 10- mi s Barbers Hill, sd 5020 ft.

FORT BEND COUNTY—Gulf Prod. Co.'s Davis 61, Big Creek, gbo 300 ft; Moore 27, set 7-in cas at 3500 ft. Long Point Oil Co.'s Fee 1, Long Point, gbo 460 ft.

GALVESTON COUNTY—Gulf Prod. Co.'s Smith 10, High Island, wash to bottom 6015 ft.

GRIMES COUNTY — Wainwright-West Oil, Ltd.'s, Templeman 1, 6 mi s Navasota, sd 3520 ft.

HARDIN COUNTY—D. O. Speights' Gidrey 1, 4 mi s Batson, sd 3010 ft. The Texas Co.'s Fee 307, Sour Lake, prep to make test 3000 ft.

HARRIS COUNTY — Humble O&R Co.'s Minnetex 4, Mykawa, sh 4980 ft; Gehring 1, sn 3700 ft. W. C. Turnbow et al's Miller 1, 3 mi e Deer Park, abn 6350 ft. Cypress Oil & Dev. Co.'s Kitzman 2, 2 mi n Cypress, sh 4110 ft. Gulf States Oil Co.'s Augsperger 1, sd 3920 ft. Sloan Prospecting Co.'s Wasova 1, Cedar Bayou, abn 5550 ft.

JACKSON COUNTY—Jackson Oil Synd.'s Lee 2, Edna, sd 4140 ft. Warner-Quinlan's Hungerford 1, Edna, ru.

JEFFERSON COUNTY—The Texas Co.'s Pipkin 4, Big Hill, sdtr at 2800 ft. Humble O&R Co.'s McFadden 1, 8 mi e of Big Hill, dr 40 ft in gbo. Keith et al's Reed-Hankamer 1, 3 mi ne Westbury, gbo 1640 ft.

LIBERTY COUNTY—Hamm et al's Harvard 1, Davis Hill, li 980 ft. J. R. Ingram's Hornbeck 1, 2 mi s Cleveland, dr water well. Harrison & Abercrombie's Blewett 1, N. Dayton, gbo 2500 ft. Harrison Oil Co.'s Quintette 4, N. Dayton, sh 4200 ft. Harrison & Abercrombie's Jones 1, N. Dayton, rock 4170 ft. Gulf's Ezzell 1, Hankamer, sn 6580 ft. Tucker et al's Bell 1, Devers, sp in. Cranfill-Reynolds' Esperson 5, Esperson Dome, sd 6230 ft; Esperson 9, sdtr at 1315 ft; Esperson 16, ru. Yount-Lee Oil Co.'s Moore's Bluff 3, set 1 joint scr hole sanded up at 6980 ft. Gulf Prod. Co.'s McFadden 3, Moss Bluff, gbo 470 ft. Humble O&R Co.'s Sterling 7, Moss Bluff, dk; Breeden 2, Moss Bluff, lcn; Hylton 1, Moss Bluff, abn 6590 ft.

MATAGORDA COUNTY — Empire G&F Co.'s Boker 1, Citrus Grove, testing salt water 6290 ft. Cockburn Oil Corp.'s Hawkins 2, Shepherd's Mott, sd 5240 ft.

MONTGOMERY COUNTY — Price & Wilhite's Juergus 2, 3 mi Conroe, sd 2950 ft. Lake Creek Oil Co.'s Hunt 1, s Conroe, sd 670 ft. Rycade Oil Corp.'s Drought 1, J. Connor sur, dr 250 ft.

ORANGE COUNTY—Gulf Prod. Co.'s Miller-Vidor 1, 2 mi n Vidor, dk.

WASHINGTON COUNTY—Yequa Oil Co.'s Graves 1, 3 mi n Independence, dk. Penn-Tex Oil Co.'s Kansas 2, Brenham, ru. Sun Oil Co.'s Janner 4, Clay Creek, rock 3390 ft; Freeman 1, Clay Creek, anhydrite 2570 ft; Grimm 1, Clay Creek, set 6⅝-in cas 1255 ft.

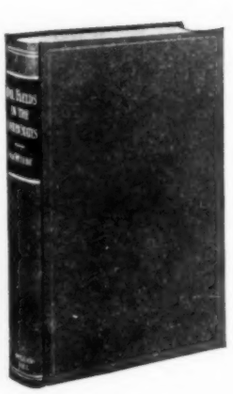
WHARTON COUNTY—Givan et al's Hudgins 1, temp abn. C. S. Thomas' Volney 1, Boling, sd 530 ft.

EAST TEXAS

HARRISON COUNTY — Shell Rock Pet. Corp.'s Daugherty 1, Burris sur, sd 3568 ft.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, claim show oil in hard chalk 1882-84 ft, cemtd 8-in cas 1514 ft, sr at 1750 ft, td 1887 ft.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 6⅝-in cas 2670 ft, set short string 5 3/16-in cas 11 ft off bottom, tested est 50,000 ft gas, hole now full sw, wo, td 2988 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, 8⅛-in cas 2027 ft, sd 2863 ft. Creighton & Hart's Kyle 1, J. Tippett sur, top chalk 1444 ft, top Blossom 2216 ft, sd in lime 3704 ft. Warren & Dawes' McNeese 1, A. Booker sur, dk. Dillon & Bradham's Baldwin



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HOUSTON TEXAS

1, Hampton West sur, rig. Texas La. Prod. Co.'s Baker 1, B. C. Jordan sur, 9-in cas 3450 ft, dr anhydrites and lime 4567 ft. Natural Gas Prod. Co.'s H. H. Alvord 1, B. C. Jordan sur, 10-in cas 1160 ft, dr lime 3820 ft. Roquemore 4, B. C. Jordan sur, rig up to deepen. Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, sp, dr 150 ft.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, fsh junk 3105 ft.

NORTH LOUISIANA

BIENVILLE PARISH—S. P. Borden et al's Thomas 1, 27-16-9w, 7-in cas 4033 ft, dr hard lime 4850 ft. Cagle Bros.' Lawhon 1, 15-16-8w, cored sandy lime 2205-2216 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, 8-in cas 1471 ft, sd 1576 ft. H. I. Morgan et al's Kendricks B-10, 22-19-11, rig up to deepen, td 1750 ft. Rambaugh et al's Allison 1, 10-19-13, dry 1100 ft, arr deepen.

CADDO PARISH—Texas La. P. L. Co.'s Wall 1, 33-23-16, dr hard lime 5050 ft. French 1, sw nw 34-23-16, 7-in cas 5102 ft, dr anhydrites 5188 ft. Junior O&G Co.'s Breard 1, 9-18-16, dr 2150 ft. Libby et al's Foster 1, 29-15-16, sd 1600 ft.

CATAHOULA PARISH—National Drilling Co.'s Marsh McMillan 1, 26-9-6e, 6⅝-in cas 2796 ft, tested sw, sd 3086 ft.

CLAIBORNE PARISH—Baird Bros. et al's Whittaker 1, 30-20-7w, sd 2200 ft. Bough et al's Alexandria 1, 27-20-8w, sd 2200 ft. Prairie O&G Co.'s F. B. Shackelford 1, elev 226 ft, se ne 30-23-5w, 12½-in cas 611 ft, top anhydrites 3889 ft, 9-in cas 3918 ft, dr red shale 4330 ft. La. O. R. Corp.'s Langston 10, 19-21-7w, sr to set 9-in cas 2438 ft.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-2e, sd 2520 ft.

CONCORDIA PARISH — La. G&F Co.'s Saunders 2, 42-8n-10e, 12½-in cas 182 ft, coring 1444 ft. Joe Marr et al's Maxwell 1, 35-3-8e, sd 3622 ft.

DE SOTO PARISH—J. W. Clark's Tidwell 1, 22-13-14, 6⅝-in cas 2910 ft, tested sw, show oil and gas 3130 ft, plugged back to 3125 ft, did not shut off sw, sd, old td 3130 ft. W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd in hard chalk 2123 ft. Standard Oil Co. of La.'s Hoell 1, 32-14-13, 10-in cas 82 ft, dr shale and gbo 2076 ft. Neff et al's Dowling 1, se se 18-13-14, dr hard chalk 1700 ft. Ramsey 1, 33-13-16, dk. S. A. Guy et al's Dowling Bros. 1, 31-14-14, sd 1354 ft.

LA SALLE PARISH—La. G&G Co.'s Tenses Delta B-2, sw ne 23-7-4e, 9-in cas 982 ft, arr make ds test 1379 ft.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, dk. Gulf Ref. Co.'s Bodcaw Lbr. Co. 1, sw ne 13-13-8w, 12½-in cas 930 ft, coring 2224 ft. W. M. Coates et al's Collins 1, 28-9-10, base chalk 2612 ft, sd 3718 ft. J. W. Cooper et al's Cooper 1, 35-11-10, dr shale 2300 ft. Cooper 2-A, 35-11-10, top chalk 1400 ft, r to bottom 1421 ft.

RED RIVER PARISH—Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, sd 3010 ft.

SABINE PARISH—Pearce, Tr.'s, Pearce 1, sw nw 10-7-11, cemtd 6⅝-in cas 2339 ft. Lawrance et al's Hubley 1, 21-7-11, sd 2650 ft. J. C. Walton's Sabine 1, ne nw 11-7-12, rig. Loring Oil Co.'s Bowman-Hicks 15, 2-7-12, dk. McDaniels et al's Baton 2, 16-8-12, 6⅝-in cas 2190 ft, dry, show oil, sd 2565 ft. Lacey Jesup Oil Co.'s Brown Lbr. Co. 1, se ne 28-8-10, 6-in cas 2256 ft at top Zwolle marl, top chalk 2690 ft, sd 3160 ft. Lacey Pet. Co.'s Cooper 1, 30-8-11, top Zwolle chalk 2306 ft, 6⅝-in cas 2270 ft, hfo, making heads, wosr, td 2620 ft. Eylers O&G Co.'s Fraser 1, nw sw 10-8-11, elev 317 ft, top Zwolle marl 2160 ft, 8¼-in cas 2150 ft, tested dry, sd 2650 ft. Magnolia Pet. Co.'s Lucius 1, 2-3n-12w, rig. R. L. Gay, Tr.'s, Bowman-Hicks 9, ne sw 18-7-13, 6⅝-in cas 2187 ft, setting liner to test, td 2683 ft. Sabine Lumber Co. A-2, ne nw 1-7-12, lcn. D. H. Reddick et al's Scretchfield 1, 18-9-12, sd 3310 ft. Pelican Nat. Gas Co.'s La. Long Leaf 7, nw sw 10-7-11, 6⅝-in cas 2320 ft, dr 2358 ft. Sabine Lbr. Co. 7, 11-7-12, top marl 2325 ft, 6-in cas 2320 ft, 600 ft oil in hole, wo, td 2399 ft. P&G Oil Co.'s Williams 1, 21-7-12, rig. T. G. Shaw's Sabine 1, 1-7-12, cemtd 6⅝-in cas 2324 ft, dry 2384 ft, arr deepen. Essco Pet. Co.'s La. Long Leaf 1, 35-8-11, 6-in cas 2346 ft, dry at 2420 ft and 2600 ft, sd 2600 ft. Trans-American Oil Co.'s Carter 1, 36-8-12, top Zwolle marl 2211 ft, 6-in cas 221 ft, 700 ft oil in hole, wo, td 2540 ft. Texas Co.'s Stokes 1, nw se 10-7-11, wosr, td 2550 ft. Stille 2, ne nw 3-7-11, dk. Longoria et al's Belton 1, 31-9-12, rig. Franks et al's Hays 1, 22-8-11, arr set 6-in cas 2211 ft. Towery Drilling Co.'s Sabine 1, 12-7-12, set 6-in cas top marl 2335 ft, flowing intermittently by heads, setting 2-in tubing, td 2436 ft. D. M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-in cas 2385 ft, hfo, building tanks, wosr, td 2800 ft. Ponder 2, ne nw 15-7-11, dk. W. M. Coates' Sabine 2, nw sw 1-7-12, lcn. Sabine P-2, sw sw 1-7-12, lcn. Wilson & Sons' Gandry-Garrett 1, 4-5-13, dr 2107 ft. Tom David's Smith 1, 27-8-10, dr 2200 ft. Merritt et al's La. Long Leaf 1, 33-8-11, 6-in cas 2294 ft, sd 2500 ft. Tarver et al's Baker 1, nw ne 36-8-12, top marl 2209 ft, 8-in cas 2212 ft, top chalk 2224 ft, sd 2825 ft. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-in cas 103 ft. H. W. Perritt's Bowman-Hicks 1, 2-7-12, 6-in cas 2230 ft, hfo, wosr, td 2388 ft. Bowman-Hicks B-1, se ne 2-7-12, lcn. Triangle Pet. Co.'s Sabine 1, sw sw 36-8-12, 10-in cas 150 ft, 6⅝-in cas 2274 ft. Diffie & Barrett's Lites 1, se nw 34-8-11, 10-in cas 105 ft. Frank Melat's Sabine 1, ne sw 6-7-11, 10-in cas 106 ft. Sabine 2, ne nw 14-7-12, 6-in cas 2250 ft, dry at 2500 ft, no chalk rock found, sd 2500 ft. J. M. Tompkins' Stoker 1, 10-7-11, dk.

TENSAS PARISH—Seip et al's Fowler 1, 10-10-10e, sd 905 ft. A. R. Willis' Curry 1, 39-11-12, sd 2780 ft.

UNION PARISH—Ouachita Nat. G&O Co., Inc.'s Smith 1, sw ne 36-20-2e, lcn.

WEBSTER PARISH—Gerhig Co.'s Miller 1, ne sw 16-18-10, 12½-in cas 200 ft, base chalk 2070 ft, dr red beds 3340 ft. D. H. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, dk. Red Hawk Oil Co.'s Matthews 1, se nw 11-23-9, dk.

OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros.' Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al's Sornick 1, nw c se, dr 1939 ft. T 26n, R 1w, Sec. 32, Boucher et al's Jefferson 1, ne c sw, lost hole 1175 ft to skid.

HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire's Bruce 1, sw c ne ne sw, show oil 7161-73 ft, dr 7847 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Collmer 2, ne c se ne sw, lost tools 5640 ft, sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al's Acre 1, c sw ne, show water 4649 ft, dr 4835 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, se c nw, sd 5825 ft.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall et al's Mich 1, nw c sw, hfw 3050-55 ft, dr 4572 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, hfw 4150-60 ft, hfw 4535-37 ft, co.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healy & Consolidated Drlg. Co.'s Quier 1, se c sw, sd 3970 ft.

KINGFISHER COUNTY—T 16n, R 7w, Sec. 6, Gault Brown's Boch 1, c nw se, (owd), td 7931 ft, dry and abn.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summit Drlg. Co. et al's Hays 1, nw c ne nw, dr 1450 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley et al's 1, se c sw, fsh 1730 ft.

PAWNEE COUNTY—T 23, R 5e, Sec. 15, Cochran et al's McFadden 1, ne c sw, rig. T 22n, R 3e, Sec. 26, Wentz Oil Corp.'s Lillie 1, se c sw ne, dr 3980 ft. T 22n, R 5e, Sec. 2, Sherry et al's Millsap 1, se c sw, sd 1750 ft. T 20n, R 5e, Sec. 6, W. A. Rookstool, Berry 1, nw ne sw, dr 1700 ft.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic's Beebe 1, sw c ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd at al's Shepperd 1, se nw sw, show water, fsh 3690 ft.

MUSKOGEE COUNTY—T 11n, R 19e, Sec. 21, E. Mills et al's Martin 1, nw c se, sd 1001 ft.

PITTSBURGH COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, sw c nw se, dr 5675 ft. T 8n, R 14e, Sec. 14, C. O. Cannady's Smith 1, sw c ne nw nw, rig and tools. T 7n, R 13e, Sec. 18, Apex Oil Co.'s Haskett 1, esl se nw, 2M gas 975-1095 ft, td 1648 ft, dry and abn.

OKLAHOMA COUNTY—T 14n, R 3w, Sec. 32, Mid-Kansas' Messer 1, sw c, sand 6690-6771 ft td, flowed 425 bbls after shot of 190 qts; now shut in. T 12n, R 4w, Sec. 17, C. F. Cuniff, Tr.'s, Orphanage 1, sw c ne sw se, sd 6700 ft td.

McCLAIN COUNTY—T 7n, R 2w, Sec. 22, Prairie & Slick's Perkinson 1, sw c nw, dr 6400 ft.

CLEVELAND COUNTY—T 6n, R 1e, Sec. 20, Harris & McNeal's Corbett 1, c sw ne, td 6760 ft, sd.

OKFUSKEE COUNTY—T 11n, R 8e, Sec. 11, Carter et al's Keys 1, sw ne sw, sand 4214-25 ft, pb 4028 ft.

POTTAWATOMIE COUNTY—T 10n, R 4e, Sec. 10, Shell's Baker 1, nw c se, lcn.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al's Bruner 1, se c nw, rig.

POTTAWATOMIE COUNTY—T 7n, R 3e, Sec. 19, Droppleman et al's Fundis 1, se c ne, dr 5300 ft, hfw. T 6n, R 5e, Sec. 5, Robinson-Hicks' Crouch 1, nw c sw, sand 4266-72 ft, swab 200 bbls, some water, sand 4389-4404 ft, pb to 4393 ft, swab 275 bbls.

ROGER MILLS COUNTY—T 13n, R 21w, Sec. 10, Richfield O&Refg. Co.'s Hiatt 1, se c, rig. T 12n, R 24w, Sec. 23, Ute Oil Co. et al's Williams 1, c sw, dr 2540 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne nw, sd 150 ft.

CADDO COUNTY—T 9n, R 13w, Sec. 18, J. J. Wright & Shell's Boys 1, ne c, lcn.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al's Blocker 1, nw c, td 135 ft. T 8n, R 18w, Sec. 21, Burns & Prince's Dock 1, sw c, rigged up and sd.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al's Cliffel 1, nw c, sd 1465 ft. T 7n, R 21w, Sec. 23, H. A. French et al's Murphy 1, sw nw se, sd 720 ft.

HARMON COUNTY—T 4n, R 24w, Sec. 17, Harmon-Tex Oil Co.'s Headley 1, ne c, show oil and gas 2374-92 ft, sd 2593 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat. Gas Co.'s Doeble 1, ne c sw sw sw, sd 1450 ft.

JEFFERSON COUNTY—T 7s, R 6w, Sec. 35, Brown & Gouin's Cox 1, sw nw ne, dr 1730 ft.

HUGHES COUNTY—T 5n, R 10e, Sec. 30, Erwin et al's Jones 1, se c ne, td 4775 ft, to pb 1900 ft, shot and tested, sd. T 5n, R 11e, Sec. 15, J. J. Wright's Roberts 1, se c sw, 2M gas 915-18 ft, sd 1645 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee Oil Co.'s Phillips 1, ne c sw, lcn.

COAL COUNTY—T 2n, R 8e, Sec. 10, Whitney et al's Miller 1, se c ne ne, dr 710 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al's Guinn 1, nw c, show gas 360-72 ft, sd 500 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla Drlg. Co.'s Anderson 1, se c ne se, td 2580 ft, dr by pipe 2500 ft.

LOVE COUNTY — T 6s, R 3w, Sec. 20, Harry Hobbs' Steele 1, sw c ne ne sw, td 3141 ft, dry and abn.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson's Ussery 1, se c, sd 325 ft. T 6s, R 9e, Sec. 35, O. P. Bush's Commerce Trust Co. 1, ne c, sd 600 ft. T 7s, R 10e, Sec. 8, Bryan Oil Co.'s Shields 1, ne c se sw, sd 510 ft.

MOUNTAIN STATES

MONTANA

CASCADE—Andover Oil Co.'s Florence 1, se 20-21-2w, dr 1200 ft.

FERGUS—Northern State Oil Co.'s Woodward 1, se 20-14n-24e, td 1000 ft, casing trouble. Melton Corp., 24-21n-17e, ur 2645 ft.

GLACIER—Fulton Pet. Corp.'s Blackfeet 1, ne 28-36n-12w, dr 1200 ft. B&H Oil Co.'s Haines 1, se 2-34-6w, dr 267 ft. Jefferies-Hoerr's Dawson 1, ne 7-31-12w, dr 2960 ft.

GOLDEN VALLEY—Texas-Pacific's 1, sw 21-8s-21e, td 1480 ft.

JUDITH BASIN—Newton-Waddingham, se 15-16n-10e, dr below 1110 ft. Pownal Oil Co., se 24-19n-11e, lcn.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-52, sd 2460 ft. Sunburst, McLaren 1,

se 9-37-6e, sd 3115 ft. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, td 3190 ft. Perkins et al's Brown 1, nw 24-35-4e, sd 150 ft. Western Natural Gas Co.'s 1, ne 23-37-4e, 10,000,000 ft gas at 2060 ft.

POWDER RIVER—Creel et al, 7-8s-50e, dr 1200 ft.

ROSEBUD—Prairie O&G Co.'s 1-X, 26-10-39e, dr in shale 2075 ft. Prairie's 1, contract 4, 28-10-38, dr out plug 765 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, sd ready to res 150 ft.

TOOLE—Liquid Gold Oil Co.'s Roberts 1, ne 25-36-12, sd 600 ft. "67" Petroleum Co.'s 1, nw 29-33-1e, sd 1400 ft. International Roy. Hold. Co.'s Henry 1, sw 26-35-36, sd 2464 ft.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pet. Co.'s 1, 7-57-97, sd 4080 ft.

CARBON—Midwest Refining Co.'s U. P. 27, 11-20-81, sd 1810 ft. Petroleum Exploration Co. of Calif, 29-23-89, show oil and gas at 790 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-44-96, cemt off bailer, td 4485 ft. P&R 1, 33-34-92, sd 4906 ft. Yellowstone Oil Co.'s 1, 15-39-92, td 185 ft. Ward O&G Co., 28-34-90, dr 318 ft. Maghee et al, 2-35-33-99, dr new hole 206 ft.

LINCOLN—Mountain Oil Corp.'s 1, 36-25-116, dr 1500 ft. Wyo. Prod. Co., 14-24-113, dr below 1000 ft.

NATRONA—Summit Oil Co., 21-33n-80w, dr below 960 ft. Midwest Oil Co.'s 11, nw 32-34n-77w, dr 4697 ft. Cuyler Oil Co., 23-36n-85w, rig.

NIOBRARA—West Virginia Synd., ne 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-27-101, flowed 100 bbls in 2 hrs, sd, td 8250 ft.

SWEETWATER—Vermillion Oil Co.'s 1, se 16-12-99, sd 3500 ft.

UINTA—Park City O&G Co., nw 6-15-113, dr below 2400 ft.

NEW MEXICO

CHAVES—Warman Oil Trust's Seibert 1, ne 27-13s-24e, dr 1965 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, ready to resume.

LUNA—Angelus Oil Mining Ass'n 1, se 20-21s-10w, sd 6000 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms. et al's A. T. S. F. 1, se 19-18n-8w, sdtr 1900 ft. United Kern Pet., Inc.'s 1, sw 1-18n-11w, lcn.

OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equipment 1328 ft.

QUAY—Silverstein et al's Wetzel 1, 29-12n-33e, sd 175 ft.

RIO ARRIBA—Berringer et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pet. Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29n-7w, sd 751 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, sd 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2030 ft. Childers Dr. & Pr. Co.'s Westwater 2, nw 23-31-16w, sd 2525 ft. Rio Grande Dev. Co.'s 2, 9-29-11w, sd 1390 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, dr 4465 ft. J. B. Witt O&G Co.'s Mangum 1, se 33-29n-11w, moving in.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2375 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, ur 6⅝-in cas at 3356 ft. Cibola Pet. Co.'s Crow 1, se 9-13n-14e, dr 840 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, dr 1542 ft. Kull et al's Cherryvale 1, ne 34-17n-21e, prep to sp.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, sd 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-17-7e, dr 1465 ft.

VALENCIA—Acme Oil Co.'s N. M.-Ariz. Land Co. 1, 26-6-3, dr 4980 ft. Harlan et al's Harlan 1-A, 5-6n-2e, dr 3495 ft.

COLORADO

ADAMS—N. M. Slatt's Hills 1, se 27-26-64w, ready to resume 2500 ft.

ARAPAHOE—McDebb Dr. Co.'s Fitzsimmons 1, 7-45-55, dr at 5769 ft. Merritt et al's U. P. 1, nw 17-5s-64w, sd 1600 ft, hfw.

ARCHULETA—Stand. of Colo.'s Fitzhugh 1, se 32-33n-1e, sd 502 ft. Brooke 1, nw 2-32n-2e, sp 30 ft. Wirt 1, nw 34-33n-12, sdtr 105 ft.

BACA—A. R. Jones Oil & Operating Co.'s Boice Cattle 1, 22-34s-42w, dr 4360 ft.

ELBERT—Belmont Oil Co.'s Maher 1, se 4-6s-59w, prep to res 3720 ft.

EL PASO—Utemore Synd.'s Cannon 1, ne 10-16s-66w, sd 1100 ft.

HUERFANO—Parker Club's Fee 1, se 4-28s-68w, sd 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-59w, dr at 3819 ft.

LAS ANIMAS—Oklahoma Drlg. Ass'n's Radcliffe 1, ne 28-28s-52w, sd 100 ft.

LARIMER—Smith et al's State 1C, se 36-12-70w, dr 330 ft. Standard Oil of Colo.'s State 2, 16-4n-69w, lcn. Hertha 1, nw 21-4n-69w, gas 2950 ft. Pring 1, ne 20-4n-69w, rig. Erbe Oil Co.'s Maxwell 1, ne 25-8n-80w, dr 171 ft. Continental Oil Co.'s Scott 3, se 6-9n-68w, dr at 4646 ft. Smith et al's Monroe 1, ne 26-11n-69w, dr 1600 ft.

LA PLATA—McGarr Pet. Co.'s Pinion Mesa 1, ne 34-33n-12, prep to sp. Klem Pet. Corp.'s Olbert 1, se 9-25n-12w, dr 3066 ft. Murchison Oil Co.'s Doescher 1, nw 29-33n-13w, sd 1225 ft, for winter.

LINCOLN—Kelley Oil Co.'s State 1, 36-14n-57w, sd 3380 ft.

MOFFAT—Mountain Fuel Supply's State 2, tract 37-12-100, dr 1240 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, sd 2950 ft. Texas Prod. Co.'s Wick 4, lot 10, fsh 4646 ft.

MONTEZUMA—Haller et al's 3, ne 33-36n-14w, sd 902 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, dr 3985 ft.

PUEBLO—No. American O&L Co.'s Boescher 1, 7-22-66, dr at 1125 ft. Anchor Oil Co.'s Easley 1, sw 35-22s-67w, dr 424 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, dr 1604 ft. So. Park O&G Co.'s Esche 1, ne 6-9s-76w, sd 605 ft.

ROUTT—Gorham et al's Omholt 1, 29-4n-87w, sd 115 ft.

WELD—Eastman Oil Co.'s Steele 1, ne 14-2n-67, sd 165 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, dr 1710 ft.

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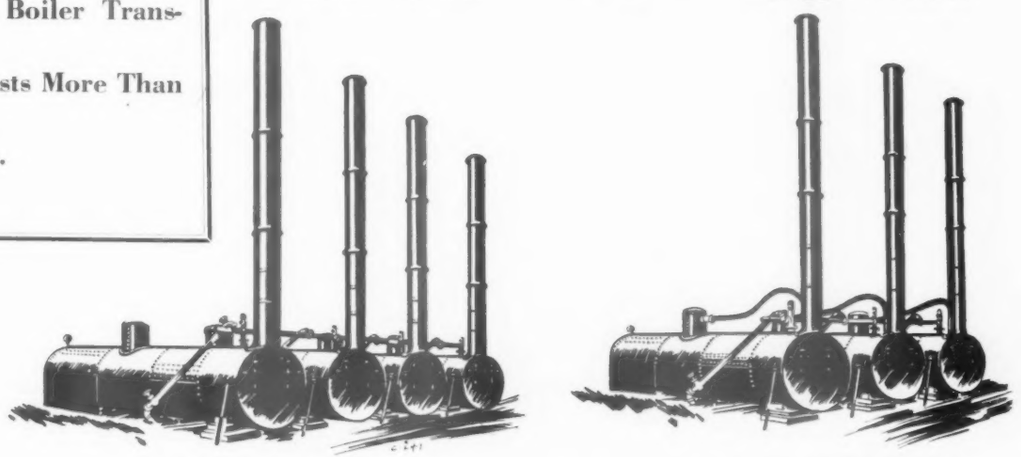

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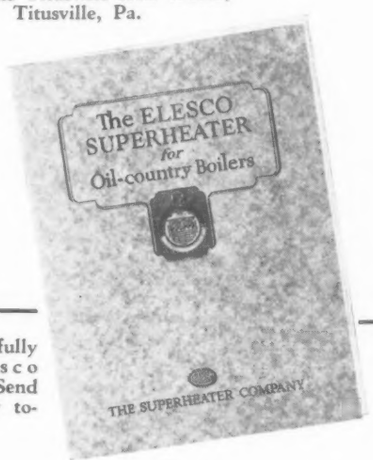

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SOUTHERN CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
SAN FERNANDO—		
Shell's Andrews 1-1, 19-2-15.....	*	6005

ALHAMBRA—George Wolfe's Construccio 1, 19-1-12, rig.

ATHENS—McKeon Oil Co.'s Sunny Heights 1, 1-3-14, dr shale and hard sand 3200 ft.

BELL—Cudahay Community Oil Ass'n's No. 1, 30-2-12, dr shale 200 ft.

CORONA—Western Gulf's Abacherli 1, 12-3-8, dr shale 12228 ft.

CULVER CITY — Olympic Oil and Realty Co.'s No. 1, co 4840 ft. Taylor Oil Co.'s No. 1, dr shale 3800 ft.

EL MONTE—Rancho Oil Corp.'s Harmon 1, 30-1-11, will deepen from 1000 ft.

FULLERTON — Standard's Bastanchury 1, 21-3-10, dr hard shale 7410 ft.

HAWTHORNE—The Alondra Co.'s No. 1, 23-3-14, rig.

HERMOSA BEACH—California Ventura Oil Co.'s Sadler 2, co 3330 ft; Union Rock 3, rig. Smith Pet. Co.'s No. 1, rig. George Wolfe's Hermosa 1, rigging up sp.

MANHATTAN BEACH—Beverly Hills Pet. Corp.'s No. 1, 24-3-15, rig. Celito Oil Co.'s Jepson 1, 25-1-12, co 5277 fet.

NEWHALL — Southern Salifornia Drilling Co.'s Needham 5, 13-3-6, lcn.

NEWPORT—T. F. Gesell's No. 1, 29-6-10, dr shale 500 ft. Standard's Irvine 1, 26-6-10, dr shale and hard sand 3200 ft.

OLIVE—Texas' Olive Community 1, 7-4-9, dr shale 707 ft.

PLAYA DEL REY—West Port Oil Co.'s No. 1, 27-2-15, dr shale 5532 ft.

PUENTE HILLS — Bardeen Pet. Corp.'s Barnadette 1, 2-2-10, dr hard shale 1450 ft. C. F. Shannon's No. 1, 3-2-10, pumping oil and water, td 4620 ft. Vega Pet. Corp.'s Rowland 1, coring 2285 ft.

REPETTO HILLS—Texas' Repetto 1, 4-2-12, new lcn.

SAN FERNANDO — Mack Oil Co.'s Deer Lake 1, 6-2-16, rigging up cable outfit. San Val Oil Co.'s No. 1, 14-1-16, dr shale 1528 ft.

SANTA MONICA—Hines Pet. Corp.'s No. 1, 8-2-15, rigging up rotary.

SAN JUAN CAPISTRANO—Okay No. 2's Foster 2, 13-8-8, dr hard sand 5240 ft.

TORRANCE—C. M. Sheeley's No. 1, 12-4-14, rig.

WILMINGTON — Wilmington Consolidated Oil Co.'s No. 1, rig.

NORTHERN CALIFORNIA

BELRIDGE—		
Rio Grande's Garcia 1, 18-28-22.....	*	3680
EDISON—		
Petroleum Securities Co.'s Johnson-Moss 1	*	4240
PATTIWAY—		
H. A. Bardeen's Ramsey 1, 10-10-23.	*	4355
MONTEREY COUNTY—		
Standard's Piedmont 1, 23-22-7.....	*	6095

KERN COUNTY

BELRIDGE — Associated's No. 2, 21-27-20, lcn. Belridge Oil Co.'s No. 27-8, 27-27-20, dr 1100 ft; No. 35-8, 35-27-20, rigging up; No. 35-33, 35-27-20, rigging up; No. 35-48, 35-27-20, sp. General Pet.'s Berry 1, 30-28-21, re-dr 2700 ft. Ohio's Bloemer 1, 36-27-20, dr shale 4555 ft. Reward Oil Co.'s Associated 1, 34-27-20, dr shale 2909 ft. Richfield's Belridge 1, 22-27-20, dr hard sand 6229 ft. Shell's Core Hole D, 14-28-28, sd 1212 ft. Standard's McPhail 1, 36-27-20, dr brown shale 4065 ft; McPhail 2, 36-27-20, dr shale 2929 ft. Texas' Martin 1, 22-27-20, dr shale 3385 ft. Union's Belridge 17, 36-27-20, dr shale 3050 ft; Gibson 7, 36-27-20, skidding rig. K. C. Wallace's No. 1, 32-29-21, dr shale 4028 ft.

BUENA VISTA HILLS — Federal Drilling Co.'s No. 1, 20-31-24, sr to cmt 9-in cas, td 5232 ft.

BUTONWILLOW—Nordon Corp.'s Salisbury 1-A, 7-29-24, dr shale 6600 ft. Superior's KCL-1, 32-29-25, dr 3525 ft.

DEVIL'S DEN—Standard's Alferitz 1, 14-25-18, sr 1535 ft.

EL TEJON—J. J. Ritchie's No. 1, 33-11-19, dr hard sand 5238 ft.

JASMINE — Chanslor-Canfield Midway Oil Co.'s Villard 1, 31-28-25, new lcn.

McKITTRICK — California Oil Producers' Wisecarver 1, 30-30-22, rigging up.

SEMITROPIC—Shell's Williams 1, dr gray sand 8865 ft.

WASCO—Cities Service Pet. Co.'s Core Hole 1, 16-28-24, dr shale 925 ft.

WEED PATCH—Mohawk Oil Co.'s Wharton 1, 32-30-29, dr shale 5450 ft. Shell's Morris 1, 32-30-29, rig; Porter 1, 29-30-29, dr shale 4820 ft; Porter-Day 1, 29-30-29, dr shale 6666 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s Augur 191-1, 24-4-9, coring oil sand 4096 ft, will make production test.

CUYAMA—Cuyama Valley Oil Corp.'s No. 1, 12-10-27, rigging up. Federal Drilling Co.'s No. 1, 27-9-26, lcn.

GATO RIDGE—Barnsdall's Tegnazzini 1, 9-8-32, dr shale 6035 ft.

GOLETA—General Pet.'s More 3, dr shale, gas sand 3810 ft.

LOS ALAMOS—N. S. Wilson's Midwest 1, dr out cmt, td 1800 ft.

ORELLA—General Pet.'s Erubru 8, 32-5-30, dr shale 4065 ft. Prairie Oil & Gas' El Capitan 1, dr shale 900 ft.

POINT CONCEPCION—Standard's Gerber 1, fsh 6820 ft.

PURISSIMA — Vaqueros Major Oil Co.'s Union Annex 3, sd 1465 ft.

SANTA MARIA—O. C. Field Gasoline Co.'s Bradley 1, 8-9-33, sd 5267 ft. Western Gulf's Bradley 1, 5-9-33, dr shale 4965 ft.

VENTURA COUNTY

HOPPER CANYON—George H. Hadley's No. 1, 13-4-9, dr sand 1022 ft.

OJAI—Knudsen and Schmidt's No. 1, 12-4-23, dr shale 628 ft.

RINCON — Chanslor-Canfield Midway Oil Co.'s Hobson A-2, 23-3-24, dr shale and streaks oil sand 7575 ft. Continental's Grubb 1, 23-3-24, new lcn.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, m 5670 ft.

SANTA PAULA — San Pedro-Pt. Fermin's Kellerman 2, 13-4-21, dr shale 2250 ft. George C. Thompson's No. 1, 15-4-21, will test showings, td 2580 ft.

SESPE—Merchants Pet. Co.'s Cochran 1, 1-4-20, dr shale 150 ft. Superior's Kirtlan 1, 15-4-21, dr shale 4055 ft.

VENTURA—Prairie Oil & Gas' Sexton 1, 30-3-22, dr shale 8035 ft.

MISCELLANEOUS

FRESNO COUNTY — Associated's Jacalitos 1, sr 3595 ft.

KINGS COUNTY—L. W. Seymour's No. 1, 10-23-16, sr to cmt 8¼-in cas, td 1010 ft. T. H. Purman's Avenal 1, 36-23-17, dr shale 1415 ft. Kettleman Lakeview Oil and Gas Co.'s No. 1, 11-23-19, dr shale 1250 ft. Murphy Oil Co.'s Brennan 1, 20-23-20, dr gray sand 2565 ft.

MENDOCINO COUNTY — Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 5465 ft.

MERCED COUNTY—Texas Pacific Coal and Oil Co.'s Core Hole 1, 4-12-11, dr shale 1450 ft.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1-A, 19-23-15, dr shale 928 ft.

SAN LUIS OBISPO COUNTY — C. J. Schilling's Potter 1, 1-29-12, co 860 ft. Cuyama Oil and Gas Co.'s No. 1, 19-10-26, rig. C. Shockley's Carpenter 1, 13-32-13, dr hard sand 2070 ft. Continental's Hellman 1, 26-25-11, dr shale 2740 ft. Latin American Pet. Co.'s Whitley 1, 31-27-15, sd 4505 ft. Pismo Dome Oil Co.'s Pricco 2-A, 5-31-13, dr shale 2975 ft.

TULARE COUNTY—Big Four Drilling Co.'s No. 1, 29-23-27, repairing 6¼-in cas, td 4330 ft. Ducor Pet. Co.'s Zimerman 1, 14-24-27, sdtr iron 2180 ft. W. D. McCoy's No. 1, 35-21-27, dr shale 765 ft. Inland Valley Oil Co.'s Smith-Rea 1, 24-17-24, sdtr iron 2055 ft.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
SEBASTIAN COUNTY—		
Lavaca O&G Co., L. Wright 1, 29-8-30	¶6	2930

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, sd 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s Underwood 2, nw se 4-20-8e, cemtd 6-in cas 237 ft, td 237 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 35-11-9, swedging out cas at 2300 ft, td 3740 ft.

DALLAS COUNTY — John James, Tr.'s

Fordyce Lbr. Co. 1, nw ne nw 11-9s-15w, dk. E. C. Brewer, Tr.'s Hillman 1, se ne 20-10-13, 10-in 88 ft, dr sandy shale and bldrs 1288 ft.

FRANKLIN COUNTY—Red Bank Oil Co.'s Hamm 1, 33-10-26w, plugged back to 3050 ft after gauging 6½ mil ft gas, td 3750 ft, tested est 8 mil ft gas 3775-84 ft, dr sandy shale 3788 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, casing pulled hole full sw sd 3756 ft.

HOT SPRINGS COUNTY — John Watkins, Tr.'s Cunningham 1, 11-5-16, sd 100 ft. Cleary Bros. et al's Hinson 1, 19-4s-16w, 11 ft sand, sd 1604 ft.

JOHNSON COUNTY—Ark. La. P. L. Co.'s Hudson 1, se ne 14-10-24, cemtd 10-in cas bot hole 2607 ft. Blackwell O&G Co.'s Wyver 1, 21-8-23, td 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, sd 20 ft.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Buck Oil Co.'s Taafe 1, 25-12-32, ds stuck at 2100 ft, td 2502 ft.

LOGAN COUNTY—Ark. La. P. L. Co.'s Jno. Jansen 1, ne ne 35-8-24, set 13⅜ cas 343 ft, sd 2400 ft. M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd while ur 5 3/16-in cas at 3570 ft, td 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallem 2, cent sec. 17-16-26, sd 405 ft; Hallem 3, ne sw 1-17-26, sd 42 ft.

MILLER COUNTY—E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, set 6⅝ cas 2792 ft, sd with junk in hole, td 2961 ft. Lenz et al's Johnson 2, 24-15-26, cored sand showing oil 3600 ft, fsh testing tool, td 3600 ft; Johnson 3, ne nw 24-16-26, sr, td 2850 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, cored sand at 2606 ft, sd 2606 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, sd wo 8-in cas 900 ft. Gusher Bend Oil Co.'s Adams 1, nw nw 24-14-26, 10-in 115 ft, sd 160 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-in 85 ft, sd. Salzer & McRae's Rose 1, ne nw 9-16-26, 10-in 98 ft, sd 475 ft.

OUACHITA COUNTY—Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, sd with junk in hole, td 2907 ft. A. B. Turner, Tr.'s Brown 1, 23-15-18, 6⅝ cas 2164 ft, top red beds 2700 ft, dr 2750 ft. Copenhaver et al's Elliott 1, se se 11-15-17, ds stuck 2114 ft. Wesson & Bonner's Wesson 1, sw nw 22-15-19, 6⅝ cas 2083 ft, blg to test, td 2151 ft. J. D. Reynolds' Pace 1, ne se 21-15-19 (Stephens townsite), 10-in 44 ft, 1015 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft, dr 1850 ft (no recent report). E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft, tested est 1 mil ft gas 3285 ft, dr hard sand 3310 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Ark. Valley Gas Co.'s Turner 1, se se 27-5n-30w, lcn.

SEBASTIAN COUNTY — M. W. Greesom's Spears 1, 9-7-29w, sd after testing sw 3515 ft. Lavaca O&G Co.'s L. Wright 1, 29-8-30, six mil ft dry gas 220 lbs rock pressure, td 2930 ft.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft, top red beds 2779 ft, dr 2888 ft. Oilfields Corp.'s J. A. Simmons 1, nw nw 9-18-13, ta 3602 ft. Rice et al's Whatley 1, 7-17-15, sd 1520 ft. H. L. Hunt, Inc.'s Swilley 5, ne ne 28-16-16, 6⅝ cas 2678 ft, 2000 ft oil, trace sw in hole, wosr, td 2689 ft; Swilley 6, se se 21-16-16, 1000 ft fluid in hole 40 per cent sw, wosr, td 2711 ft. Marine Oil Co.'s W. B. Thompson B-3, se ne 10-18-13, 10-in 292 ft, dr 2510 ft. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-in cas 210 ft.

WASHINGTON COUNTY — Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-21, sd while fsh tools, td 5710 ft.

MISSISSIPPI

Company, Well and Location	Initial Production Bbls.	Depth
ATTALA COUNTY—		
Ark. La. P. L. Co., Moore 1, 2-15n-5e . . . . . *-sw		3772
RANKIN COUNTY (Jackson Dist.)—		
Feazel O&G Co., Cox 1, 12-5.1e. . . . ¶40¾		2392

ALCORN COUNTY—Alcorn Pet. Co.'s Mathews 1, se se 14-2s-7e, ta with fsh job, td 2735 ft.

ATTALA COUNTY—Ark. La. P. L. Co.'s Moore 1, se nw 2-15n-5e, elev 271 ft, top Selma chalk 2277 ft, base chalk 3028 ft, sw, abn in gravel probably Tuscaloosa, td 3772 ft.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft, 13⅜-in cas 1389 ft, dr 2900 ft.

COVINGTON COUNTY (Collins Dist)—Miss. Gulf O&G Co.'s Pope 1, nw ne 35-8n-16w, 12½-in cas 126 ft, sd in sand 800 ft. S. P. Borden et al's McIntosh 1, sw ne 5-8n-16w, sp.

CHICKASAW COUNTY—Hightower & Golsan's Fleming 1, 20-13s-3e, sd 1562 ft.

GRENADA COUNTY—Carter Oil Co.'s Dubard 1, nw nw 18-22-4e, moving in rig.

HINDS COUNTY (Jackson Dist)—Mrs. Ella Rawls Reeder's State Land 1, sw nw 25-6-1e, sd 2905 ft. Jackson O&G Co.'s Central Cotton 1, sw nw 3-5-1e, dk. Love Pet. Co.'s Maley 1, se nw 15-5-1e, elev 257.3 ft, top Midway shale 2387 ft, top chalk 2437 ft, 6⅝-in cas 2487 ft, flowing through two 4-in lines making est 50 bbls heavy gravity oil, 1000 bbls sw, 3 mil ft gas, td 2495 ft, (1000-2000 bbls heavy oil in storage). Pirtle & Flint's Negro Fair Ass'n 1, nw se 28-6-1e, top Midway shale 2420 ft, top chalk 2498 ft, cemtd 4½-in cas top chalk 6-in cas 2379 ft. Southern Pet. Co.'s Wilson 1, se ne 23-6-1e, sd 20 ft. Miss. Pet. Co.'s Solvent 1, sw sw 14-5-1w, top Midway shale 2970 ft, dr black shale 3187 ft. Howard Oil Co.'s Jackson College 1, nw nw 9-5-1e, set 15-in cas 12½ ft, sd. Atkisson et al's Wiggins 1, nw ne 33-6-1e, top Midway shale 2392 ft, 6-in cas top Midway chalk 2490 ft, elev 307.8 ft, came in est 6 to 15 mil ft gas, td 2493 ft, arr kill to cemt off bad joint cas, gas escaping between 6-in and surface casing. Downey 1, ne ne 27-6-1e, rig. Kennedy et al's

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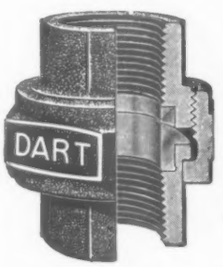

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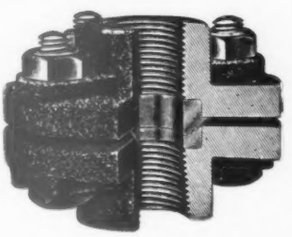

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Fee 1, ne ne 34-6-1e, lcn. Gulf Ref. Co.'s McLaurin 1, sw ne 30-6-2e, top midway shale 2392 ft, wo to dr plug in, 9-in cas set at 2466 ft. Cane River O&G Co.'s Kabbes 1, ne sw 15-5-1e, elev 262 ft, top Midway shale 2435 ft, top chalk 2541 ft, 7-in cas 2541 ft, sr in red beds 3210 ft. Love et al's Ridgeway & McGehee 2, ne nw 2-5-1e, elev 271 ft, rig. Iowa Gas Co.'s Payne 1, nw nw 15-5-1e, dr 2268 ft. Miss. Pet. Co.'s Baptist Orphanage 2, ne se 28-6-1e, rig. Feazel O&G Co.'s Garrett 1, se nw 2-5-1e, elev 271 ft, sp Love Pet. Co.'s Taylor 1, se nw 34-6-1e, rig.

JASPER COUNTY— (Bay Springs Dist.)—Bay Springs Pet., Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, set 15½-in cas 104 ft.

KEMPER COUNTY (De Kalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10-1w, rig up wo.

MADISON COUNTY (Jackson Dist.)—Central O&G Co.'s Cameron 1, se se 11-9n-1e, 10-in cas 300 ft, dr 305 ft (to be 4000 ft test.)

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, sw ne 2-13-19, all cas pulled and hole clean, wo 3007 ft in brown sand. P. J. McAlpine's Cowart 1, ne sw 2-12-19, 10-in cas 694 ft, sd in red Tmerock 1125 ft. Associated Royalties' School Board 1, sw sw 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, moving in rig. Carter 3, se se 7-13s-17w, 10-in cas 564 ft, 6⅝-in cas 2382 ft, tested est 100,000 to 250,000 ft gas, td 2400 ft, sand 2382-96 ft, shale 2396-2400 ft, probably to be be completed at present depth.

NESHOBA COUNTY (Philadelphia Dist.)—Collins et al's Carter 1, se se 29-11n-12e, dk.

RANKIN COUNTY (Jackson Dist.)—Feazel O&G Co.'s Cox 1, se ne 12-5-1e, elev 269 ft, top Midway shale 2296 ft, top chalk 2388 ft, set 6⅝-in cas 2371 ft, gauged 40,768,000 cu ft gas td 2392 ft. Sabine O&G Co.'s Rankin Dev. Co. 1, sw ne 6-5-2e, elev 273 ft, top Midway shale 2437 ft, top chalk 2548 ft, sd 2548 ft. Gulf Ref. Co.'s Hamilton Est. 1, sw sw 4-5-2e, elev 284 ft, top Midway shale 2537 ft, top chalk 2620 ft, 9-in cas 2610 ft, top red beds 3059 ft, dr sand and shale 3836 ft. Love et al's Muse 1, se se 32-7-4e, reset 12½-in cas 600 ft, dr 1000 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw se 6-5-2e, top Midway shale 2410 ft, top chalk 2496 ft, 7-in cas 2476 ft, arr test, td 2497 ft. Pearl River O&G Co.'s Pate 3, se sw 12-5-1e, elev 269.5 ft, 10-in cas 268 ft, wo cas at top of Midway shale 2335 ft. Pioneer O&G Co.'s Ragland 1, sw sw 12-5-1e, dk. Ganzel et al's Stallings 1, ne ne 25-5-1e, rig. Miss. Gas & Fuel Co.'s Hanna 1, sw ne 14-5-1e, dk.

WARREN COUNTY (Vicksburg Dist.)—Dixie Pet. Co.'s Clark 1, sw sw 31-17n-5e, rig. Vicksburg O&G Co.'s Dornbusch 1, 8-18n-5e, sd 1600 ft.

WEBSTER COUNTY—Cumberland Oil Co.'s Henley 1, 15-21-11, ta 1865 ft.

WINSTON COUNTY—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, sr, td in shale 1809 ft.

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collette et al's Blackmer 2, sw

ALABAMA

Company, Well and Location	Initial Production Bbls.	Depth
HOUSTON COUNTY—		
J. R. Sealey, Fee 1, 13-1n-27e	*	3100
MORGAN COUNTY—		
Albany-Decatur O&G Co., English 1, 6-6-4	*	4130
SUMTER COUNTY—		
B. W. Bates, Fee 1, 3-18-1w	*	1200

HOUSTON COUNTY—J. R. Sealey's Fee 1, 13-1n-27e, dry abn td 3100 ft.

MORGAN COUNTY—Albany-Decatur O&G Co.'s English 1, 6-6-4, dry abn td 4130 ft.

SUMTER COUNTY—B. W. Bates Fee 1, 3-18-1w, dry abn td 1200 ft. Fee 2, 3-18-1w, lcn abn.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft. Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, dr hard lime 2075 ft, (no recent report.)

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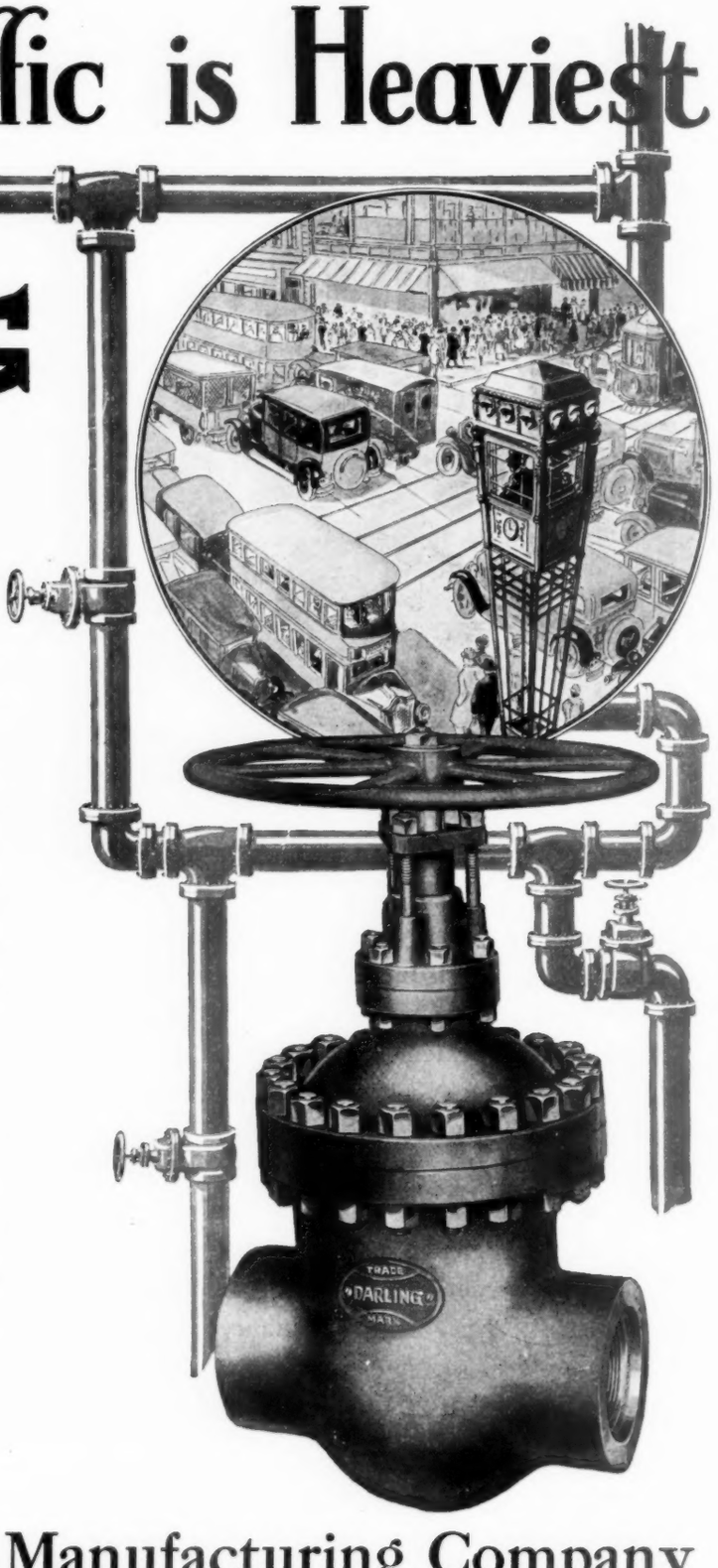

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New Equipment for the Field

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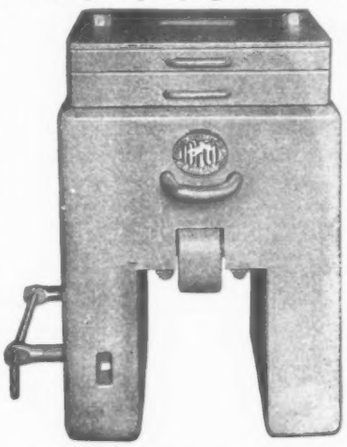
Ideco-Boykin Pumping Weight

INTERNATIONAL DERRICK & EQUIPMENT CO.

International Derrick & Equipment Company announces the Ideco-Boykin pumping counterbalance weight (Yount patent) to provide a simple and effective way of balancing the weight of the rods and tubing on pumping wells. It is especially applicable to deep well pumping and is designed to permit a smooth and even stroke.



Ideco-Boykin Pumping Weight

The weight is designed for use with standard 12-inch and 14-inch walking beams. It is constructed in a variety of weights. Additional weight elements as shown in the photograph, may be added to give any weight desired. These are made so that they can be handled easily.

The counterbalance weight is provided with rollers which serve to facilitate the moving of the weight to the exact position along the beam for the most efficient operation. The rollers make it a simple matter for one man to move the weight along the beam. Two set screws provide a means of fastening the counterweight at any desired position. The screws are locked in place after the weight has been securely fastened to the beam, by means of a safety locking rod, which prevents the screws from loosening due to vibration and other causes.

When pulling the rods or tubing, the weight can be moved to a position immediately over the saddle and anchored so that the walking beam may be swung out of the line of operation.

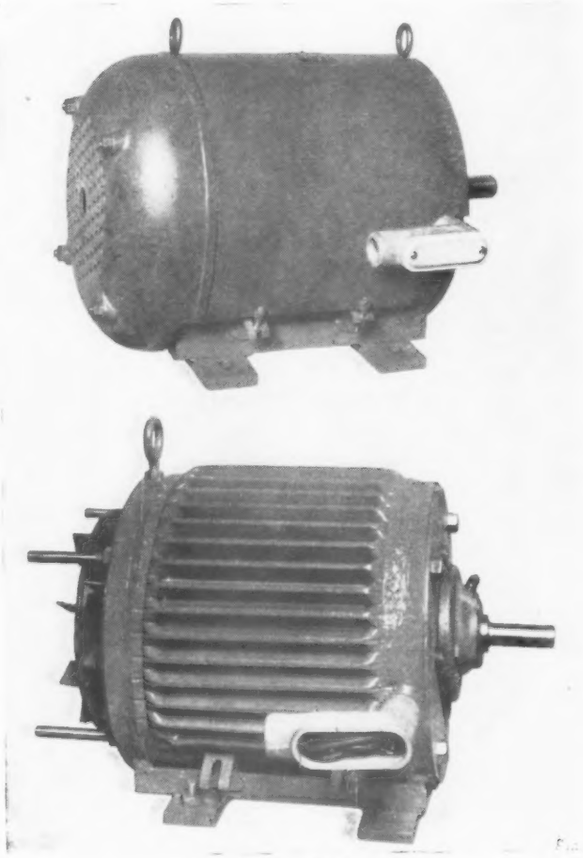
These weights are manufactured at the Boykin plant of International Derrick & Equipment Company, Beaumont, Texas.

New Induction Motor

LINCOLN ELECTRIC COMPANY

Lincoln Electric Company, Cleveland, announces a totally enclosed, fan-cooled, induction motor which embodies numerous new features. The motor is so designed that its rise in temperature is slight. The design includes arc welded steel construction, double sealed ball bearings, and a removable cover to facilitate easy cleaning of the unusually large radiating surface.

The large radiating surface is obtained by complete enclosure of sides of the motor with a deeply corrugated sheet of corrosion resisting metal. This conducts the heat created within the motor to its outer radiating surface which is constantly cooled by a continual draft of fresh air passing over the radiating surface. The air imprisoned within the completely sealed frame is constantly circulated by a fan arc welded to the rotor. This fan drives the heated air within the motor to continuous contact with the large corrugated cooling surface. The outside air which drives the heat from the radiating surface is forced over the exterior of the corrugated surface by a large arc welded fan attached to the motor shaft. The outside air is drawn in at one end of the motor and expelled at the other end.



Lincoln Fan-Cooled Motor

The corrugated cooling surface is accessible for cleaning as the one-piece cover can be removed by loosening two thumb screws. The motor frame is fabricated of arc welded steel. The stator laminations are stacked in the frame by hand, then put to high pressure. While under pressure they are permanently affixed by a retainer ring arc welded to the frame.

This new "Linc-Weld" motor has the same mounting dimensions as standard, open type, horizontal motors of equal rating. It is manufactured in sizes from one to 50 horsepower.

New Side Boom Unit

W-K-M COMPANY, INC.

W-K-M Company, Inc., of Houston, announces the production of a new side boom unit for attachment to the Model "U" Alis-Chalmers industrial tractor. Although designed especially for pipe line work, the utility of the ma-

chine is not confined alone to this particular field of handling activity.

It lifts and carries loads of 3000 pounds when properly counterweighted and much heavier loads when a stiff-leg is employed. The unit is easily maneuvered, on the job or when traveling, being compact in design and construction, with the main working parts of the machine close to the body of the tractor and controls within accessible reach of the operator. While in transportation from one job to another, the unit can be driven at the speed of a passenger car. Installation, which requires no drilling or cutting, can be accomplished in the field or at the factory.

Challenger Angle Derrick

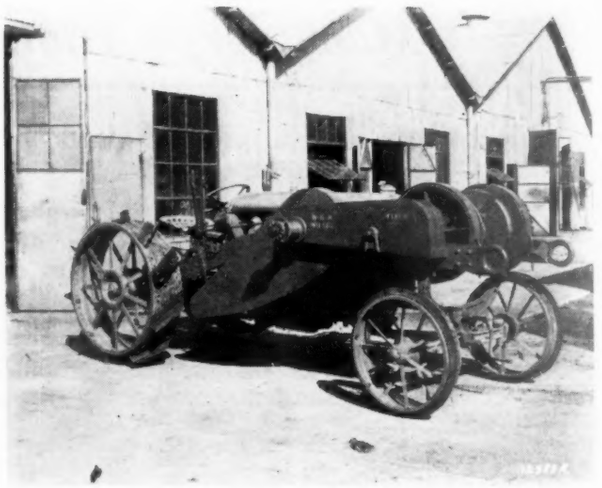
LEE C. MOORE & COMPANY

Lee C. Moore & Company, Pittsburgh, announces the Moore Challanger angle derrick, a new design which is added to the company's line of steel derricks. The accompanying photograph shows a view of a 122-foot angle derrick in the old shallow Hull, Texas field, which recently completed a well in the deeper sands on Houston Production Company's lease.

New Lee C. Moore Derrick

The derrick is a galvanized 122-foot angle derrick, having six by six by five-eighths-inch starting legs, with six by six by one-half-inch upper legs. Double panel bracing below the fourble platform, with double three-quarter-inch bolted connections on the girts and braces are used. The derrick has wing bracing in the first panel to insure rigidity in the first panel and to give more clearance around the drawworks cat head when the framing braces are removed, thus preventing a bending thrust in the starting legs due to a horizontal thrust from wind or drilling motion.

The manufacturer states that this derrick has a safe working capacity of 322,500 pounds, but with the use of silicon steel legs are used in place of standard structural steel legs, it would have a capacity of 410,000 pounds.



W-K-M Side Boom

Ground Thread Chasers

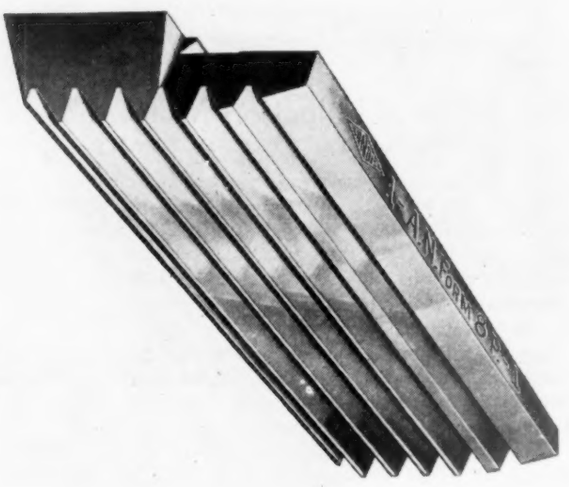
LANDIS MACHINE COMPANY

Landis Machine Company, Inc. of Waynesboro, Pennsylvania, has developed and placed on the market a new ground thread chaser.

The thread form is ground by a new process on special grinding machines. This process is designed to removed the minor inaccuracies and distortions resulting from the heat treatment and produces a uniform thread form with a flat crest and root.

These new chasers, in addition to retaining the features of other Landis chasers, possess the ground thread form which offers greater accuracy and also a freer cutting action which increases the life of the chaser between grindings.

Landis ground thread chasers are now available for all sizes of Lanco and Landex heads and for the 5/8-inch, 7/8-inch, 1¼-inch and two-inch Landmatic heads.



Landis Thread Chaser

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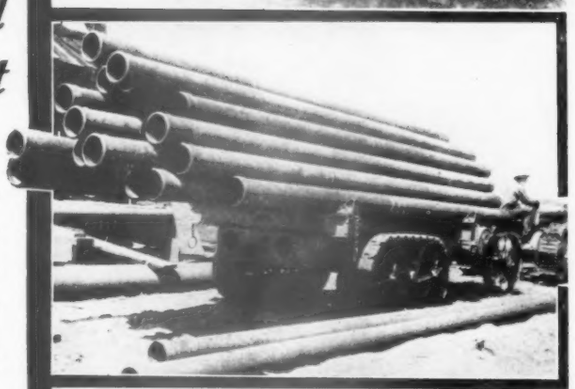
Atheys are built in five capacities—3, 6, 10, 15 and 20 tons
By connecting them in train, these capacities can be increased to 20, 30, 40 tons and more.



Turn over your heavy hauling jobs to ATHEYS. That's what they are built to do. That's their job.

For the oil industry, this ability is doubly important. Machinery, tanks, drill stems, pipes, tools—a great variety of heavy, bulky equipment—so often must be transported over bad roads or no roads at all. Under such conditions—common to the oil industry—ordinary equipment is inadequate, expensive and uncertain.

With ATHEY'S light-running qualities and large capacities, the same tractive power hauls twice as much. This cuts your trips in two and saves half the time. Atheys are easier on tractors. Maintenance costs are sharply reduced. Bad roads can't stop ATHEYS. They'll carry capacity loads wherever tractors or animals can operate. ATHEY'S all-steel construction brings long life under all conditions.

You'll be surprised how the many practical advantages of ATHEY TRUSS WHEEL WAGONS will cut your hauling costs. Write—and we'll tell you.

ATHEY TRUSS WHEEL CO.
130 N. Wells St., Chicago, U. S. A. Cable Address: "Trusswheel," Chicago
The Baldwin Locomotive Works, Foreign Representatives, Philadelphia, Pa.

Athey
TRUSS WHEEL EQUIPMENT

Manufacturers and Supply Dealers Notes

Sun Shipbuilding & Dry Dock Company, Chester, Pennsylvania, will have ready for launching early next summer a new tanker for Atlantic Refining Company which will have an all-welded hull instead of plates riveted in the usual fashion. It is announced as the first steel ship of any kind to be built in the United States without the use of pneumatic hammer and rivets.

The new tanker, 200 feet in length, will have a beam of 34 feet, a moulded depth of 12 feet, and a motive equipment of three 150-horsepower Cooper-Bessemer Diesel engines direct driving a trio of electric generators. The main propulsion motor is 400 horsepower. It will have a fuel capacity of 7000 gallons. It will be the thirteenth of its type in this country. The triple motors and generators are so arranged that any two may be used while the ship is under way and the third may remain idle for reserve power or for overhauling if occasion should arise.

GLENN HENDRICKSON

ROBERT PHILLIPS

Wico Electric Company, manufacturer of Wico magnetos, has appointed Robert Phillips as field representative in the Seminole district, making his headquarters with National Supply Company at Seminole, Oklahoma. He is working under the Tulsa office, 115 West Eighth Street, which was established several years ago with Leon F. Smith in charge. Glenn Hendrickson has been made field representative in Texas fields, with headquarters at the Generator Service Company, 1151 Commerce Street, Fort Worth. Wico Electric Company operates a large service branch in Tulsa where a corps of factory trained men are employed to service and repair Wico magnetos, using parts direct from the Wico factory.

J. H. Bunnell Company, 215 Fulton Street, New York City, has issued a 16-page booklet entitled "Gauging Fluid Levels Instantly, Safely and Automatically." It briefly tells the story in pictures and description of the MacCreedy fluid level indicator, an electrical remote control gauge, which automatically indicates the fluid levels of reservoirs or storage tanks within an accuracy of one-eighth of an inch and which gives continuous readings at one or more points 24 hours a day. A complete outline of how the MacCreedy fluid level indicator operates in practice is given with a mechanical drawing labeled to show the working of the parts. The workings of the transmitter, which is the heart of this gauge system, is also pictured and told. Illustrations are given showing the whole system on the job. J. H. Bunnell Company will supply a copy of this booklet upon request to the address above.

Worthington Pump & Machinery Corporation, Harrison, New Jersey, announces the publication of a 32-page bulletin covering Worthington deep well pumps, including Axiflo, Hiflo and Coniflo. Photographs of these pumps working and also mechanical drawings showing every working part, serve to thoroughly illustrate this line of pumps both for deep well pumping and in deep sea terminal loading. The bulletin is cut for insertion in loose-leaf filing. Copies are available by writing the general office, shown above, or to the executive offices at 2 Park Avenue, New York City.

Westinghouse Electric & Manufacturing Company, at a recent meeting of the board of directors elected Claxton E. Allen, formerly manager of the southwest division, a commercial vice-president. Mr. Allen has been associated with the company since 1909. He was graduated with the degree of Bachelor of Science in electrical engineering from the Virginia Polytechnic Institute in 1901. Mr. Allen's headquarters office is East Pittsburgh, Pennsylvania.

Dunbar Engineering Company, 122 East 42 Street, New York City, is now representing The Edward Valve & Manufacturing Company in those portions of New Jersey, Pennsylvania, Delaware, Maryland, and Virginia, which have heretofore been handled by representatives located at Philadelphia and Baltimore.

James K. Aimer has been appointed assistant general manager of sales in charge of railroad, locomotive and car equipment sales, also iron and billets sales for Reading Iron Company. He is located at 230 Park Avenue, New York City.

George H. Woodroffe, who formerly held this position, will now serve in an advisory capacity to the general sales organization with respect to technical problems.

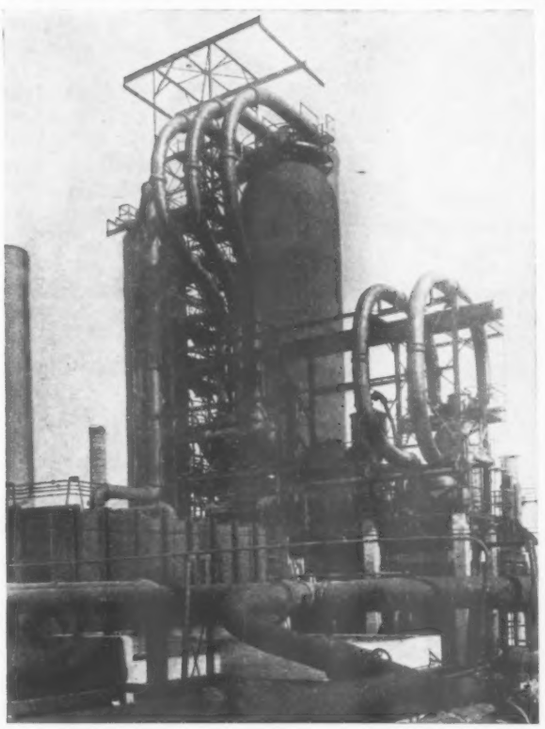
Wyman Howells, district sales representative, Reading Iron Company, 1302 First National Bank building, Pittsburgh, is making a good recovery and will resume his duties in the near future, following an operation for appendicitis.

R. N. LUCCOCK

Walter O'Bannon Company of Tulsa, manufacturers of oil field specialties, announce the appointment of R. N. Luccock as sales representative covering the West Texas and New Mexico territory. He will have headquarters at Big Spring, Texas, and travel from the Ranger area on the east to the Artesia field on the west. He formerly was with Humphreys Corporation and later went with Gypsy Oil Company. His start in the oil industry was made in the Corsicana field in Central Texas as a roustabout.

GULF

Modern Methods Make Modern Gulf Products



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General Sales Offices: PITTSBURGH, PA.

SQUEAKS FROM THE BULL WHEEL

The owner of a cheap watch brought it into the jeweler's shop to see what could be done for it. "The mistake I made, of course," he admitted, "was in dropping it."

"Well, I don't suppose you could help that," the jeweler remarked. "The mistake you made was picking it up."

You can realize the great distance of this star from the earth when you consider that the light took several thousand years to reach the earth.

Yes, but the stars only shine at night; otherwise it would have got here quicker.

Wot excuse does he make for not lookin' fer a job?

All of 'em.

Sandy was having a lot of trouble with a floating kidney and asked the preacher to pray for him before the congregation the next Sunday.

"It would be out of place to pray for a floating kidney before the congregation," replied the minister, "but I'll be glad to pray for your general condition."

This didn't set well with Sandy and after some thought said: "I don't see why you can't pray for a floating kidney when last Sunday you prayed for loose livers."

Dentist: "I'm sorry, but I'm out of gas."

Sweet Patient: "Ye gods, do dentists pull that old one, too!"

Little Brother: "If I wasn't here your boy friend would kiss you."

Big Sister: "You impertinent boy! Go away this instant."

"Don't you want to buy a bicycle to ride around your farm on?" asked the hardware clerk, as he wrapped up the nails. "They're cheap now. I can let you have a first-class one for $35."

"I'd rather put $35 in a cow," replied the farmer.

"But, think," persisted the clerk, "how foolish you'd look riding on a cow."

"Oh, I don't know," said the farmer, stroking his chin; "no more foolish, I guess, than I would milkin' a bicycle."

Sambo had received a book for Christmas and was being questioned by his little friend, Rastus.

"Boy, what's de name of yo' book?"

Sambo scrutinized the title knowingly, then shoved the book under Rastus' nose, saying, "Dar yo' is!"

Rastus took a good look and exclaimed, "Sho is, isn't it?"

There was an all around good for nothing man who lived, and at his funeral the minister delivered a most beautiful address, eulogizing the departed in the most glowing manner, praising his splendid qualities as a fine type of a man, a good husband and a kind parent. About this time, the widow, who was seated well up in front, spoke to her little daughter by her side and said, "My dear, go look in the coffin and see if it IS your father."

"Daddy, I know how to do everything," said the little boy of five.

"What I don't know isn't worth knowing," said the young man of twenty.

"Well, anyway, I do know my own trade from A to Z," said the man of thirty-five.

"There are very few matters, I am sorry to say, that I am really quite sure about," said the man of fifty.

"I have learned a bit, but not much, since I was born; but knowledge is so vast that one cannot become wise in a short lifetime," said the man of sixty-five.

New Office Boy: "I've added those figures up ten times, sir."

Employer: "Good boy!"

New Office Boy: "And there's the ten answers, sir."

Caller: "I want to see the boss."

Office Girl: "Sorry, but he's in conference with the vice-president and general manager."

Caller: "Let me in. I know a funny story, too."—*Exchange.*

Customer: "Are you quite sure this suit won't shrink if it gets wet on me?"

Mr. Greenberg: "Mine frendt, effery fire company in the city has squirted vater on dot suit."—*High Tension News.*

At least one United States senator drives a second-hand car. One of the problems of congressmen and other officials is to run the gauntlet of Washington correspondents after a conference at the White House. After an hour's talk with the president, recently, Senator Vandenburg of Michigan was surrounded by the writers and asked what the conference was about.

"I can't tell you what I talked about," the senator told them.

"Well," asked one, "can't you tell us what brought you here?"

"Yes, a second-hand car."

Visiting Principal—Who is that fidgety boy that can't sit still in his seat for two seconds?

Teacher—Oh, that's one of our last summer's champion tree sitters.

Maloney Vapor-Pressure Tanks are built to eliminate breathing and to hold both the volume and gravity of the oil.

"Alone in Quality"

MADE OF KEYSTONE AMERICAN

MALONEY TANK MFG. CO.
Tulsa, Oklahoma

Distributers at All Principal Petroleum Points

Sizes: 12 to 10,000 Barrels

Packed in Steel-Bound Crates for Export

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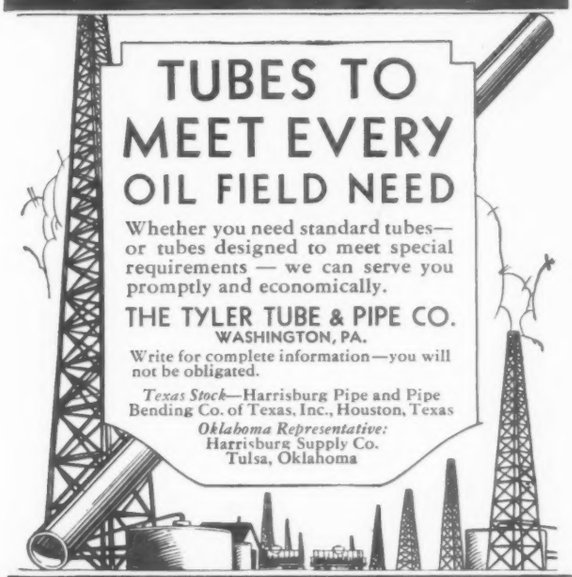

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Whether you need standard tubes—or tubes designed to meet special requirements — we can serve you promptly and economically.

THE TYLER TUBE & PIPE CO.
WASHINGTON, PA.

Write for complete information—you will not be obligated.

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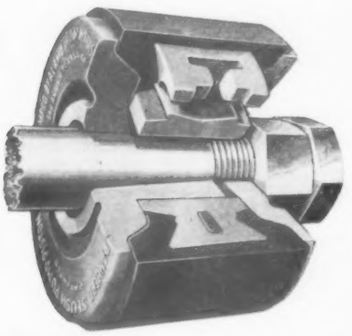
BOILER TUBES

Ramhead
SLUSH PUMP PISTONS



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Greater Efficiency . . . Longer Life

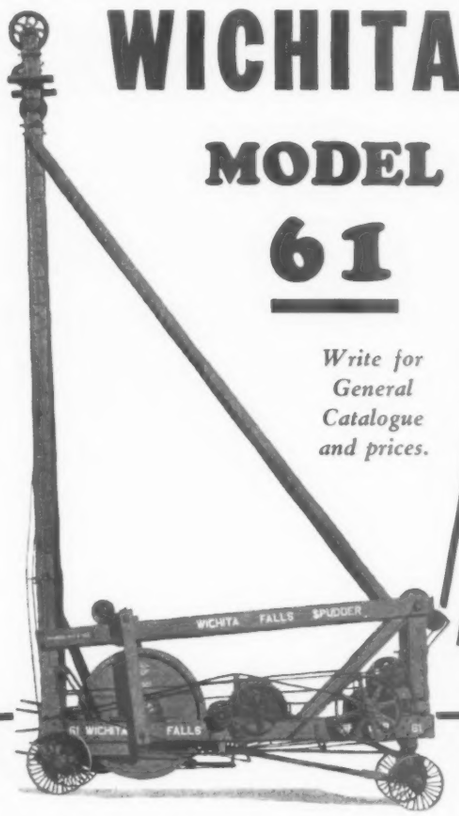
Ramheads are practical long-life pistons that have been proved by gruelling tests in the field. They are simple, easily installed and foolproof. Order a set on trial and prove to yourself, under your own conditions, that they will cut your piston expense and servicing to a minimum.

Alamo Iron Works
SAN ANTONIO, TEXAS

WICHITA FALLS SPUDDER

MODEL 61

Write for General Catalogue and prices.



—and now a 4,000-foot portable drilling machine

The success of models 50 and 55 of the Wichita spudder line in drilling from 1,000 to 3,000 feet convinced operators and drillers that Wichita Machines are capable of drilling to much greater depths than they have been recommended for and so the Clark Machine Company leads the field again in presenting this new 4,000-foot portable drilling machine.

This model is fully equipped with SKF Anti-friction bearings, our own patent wire line spudding device and patented friction reverse and has been designed and constructed on the same lines of quality and ruggedness as are all the "Wichita" machines.

Six sizes to meet your requirements.

CLARK MACHINE COMPANY
FACTORY
WICHITA FALLS TEXAS

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"See 'em everywhere I go—and I get around a lot. Boys throughout the field tell me they're the best made, and *they must be* for the same fellows use 'em year after year."

Harrisburg Forged Seamless Steel Couplings are popular because they are always reliable, always uniform—*always dependable.*

Harrisburg Couplings are popular because they push production ahead and keep production costs down.

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This GUIBERSON DISC BIT, unlike the usual mascot, is not merely a decoration but is the chief reason for these men being the speedy crew that they are. They regard it with an affection equalling what is felt for the mascots of men in sport and adventure throughout the world.

THE GUIBERSON DISC BIT, with its four discs, carefully designed and fitted, makes hole with amazing speed and reams down full size as it goes. Water flush holes extend to bottom of bit, keeping cutters clean and opening fresh surfaces to the cutting edges. Although not intended as a hard rock bit, the Guiberson Disc Bit cuts through intervening shells, obviating the necessity of pulling out to change bits. The speed and long life of the Guiberson Disc Bit result in an astonishingly low cost per foot of hole drilled.

The crew above is working in the Oklahoma City field. Left to right: H. L. Smith, fireman; Ben Morton, driller; Ben Jones, derrickman; J. L. Womack, pipe racker; R. W. Adams, backup man; Tony Short, Guiberson Representative.

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